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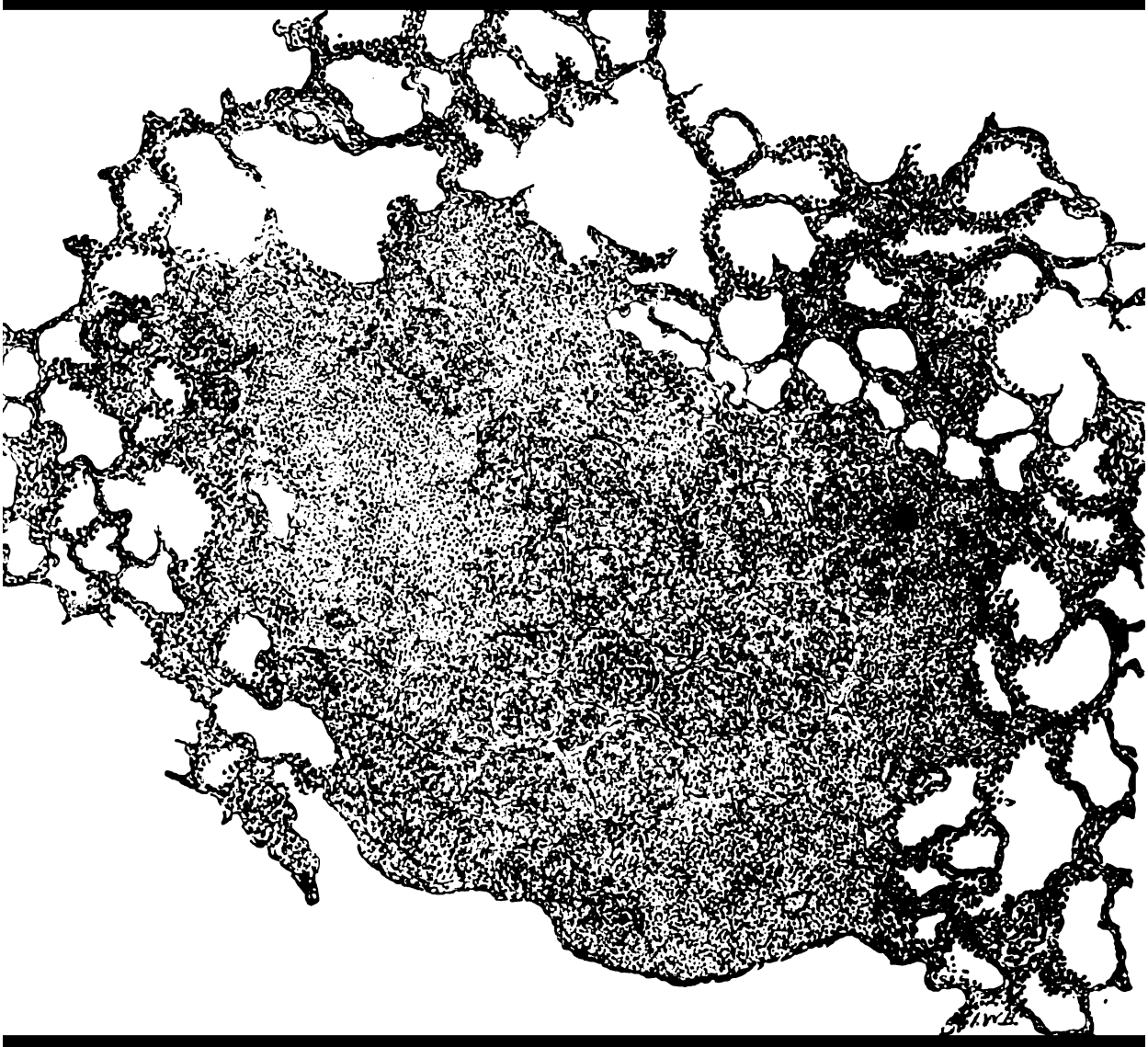

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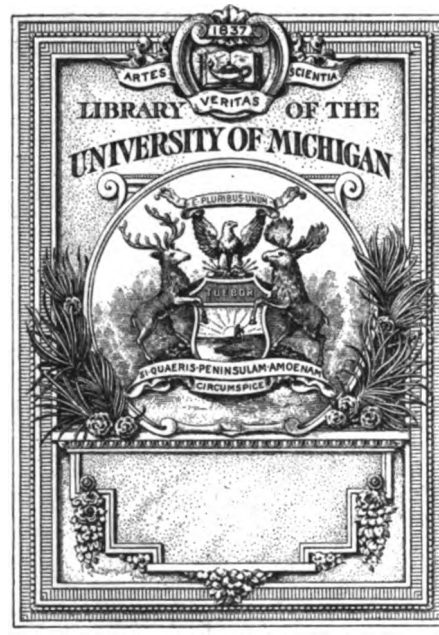

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PHILADELPHIA, OCTOBER 7, 1882.

ORIGINAL COMMUNICATIONS.

THE VOMITING OF PREGNANCY.

Read before the Philadelphia County Medical Society, September 13, 1882,

BY WILLIAM B. ATKINSON, M.D.

PERHAPS no condition of the pregnant woman is so full of annoyance, and at times so liable to lead to disastrous consequences, as the nausea which occurs particularly in the early months. Totally absent with some, with others it becomes a source of distress and danger, ceasing only with the expulsion of the fœtus or the death of the patient.

While the latter extreme is very rare, the constant spitting, nausea, or vomiting is frequently the accompaniment of a pregnancy, rendering the life of the woman a burden, and she only obtains a certain degree of comfort when, under the influence of anodynes, sleep secures for her a respite.

The limits of an introductory paper will not permit of any extended remarks beyond the strict line marked out by your business committee,—"The Prevention and Treatment of the Vomiting of Pregnancy."

Now, in order that we may be prepared to treat or prevent a disease, it is eminently necessary that we should understand its cause, its real nature. Undoubtedly this condition results from two causes. In the early stages, the nausea, etc., are due to sympathetic disturbance of the stomach. Later, we have added direct pressure upon and interference with the functions of that viscus.

Now, these causes act with greater or less power as they occur in a patient with an irritable stomach, one prone to be disturbed by the slightest irregularities in food or digestion, or in one who has an ostrich-like power which enables her to load the stomach and carry through to the bowels matters which can only be partially digested, and must eventually pass away as foreign bodies.

With the hope of making pregnancy so comfortable that the ordinary objection to this condition on the part of the woman may be greatly lessened, the entire prevention of nausea and vomiting has been proposed and sought for by many obstetricians.

We must not forget at this point that in earlier days, and even now to a limited extent, it was believed that a sick pregnancy was a healthy one, and many practitioners, when these symptoms were absent, endeavored to imitate them by the employment of ipecacuanha and similar drugs.

It is difficult to understand how to proceed to prevent a condition which has not presented itself, and which may never occur. For we find in practice that a large number of women never exhibit the slightest nausea in any of their pregnancies, and many others suffer so little that it is deemed of no moment.

We may, indeed, having other reasons to regard the woman as pregnant, advise her to avoid carefully all articles of food which are likely to give rise to irritable stomach, and also to observe care as to the regularity of her meals and habits. Beyond this we have no indications by which to be guided. The treatment of this trouble may then be considered under the heads of its relief when present, and efforts to prevent its return.

In the milder cases it is doubtful how much of the benefit is due to the remedy, and how much to the course of nature, in which the trouble would disappear spontaneously.

Many of the so-called cures which are so highly vaunted owe their supposed efficacy, in the successful cases, to the fact that little was needed to quiet an irritated stomach, irritated, perhaps, by carelessness or over-indulgence, which was intensified by the condition of the patient. It is only under this view that we can understand the wonderful effects of remedies as diverse as their names.

Therefore we may expect, and almost invariably obtain, relief in the great majority of cases from the use of sedatives and narcotics, as the bromides, chloral, morphia, carbonic acid water; from alkalies; from bitters, by their tonic action on the stomach, as gentian, calumba, quassia, nux vomica, etc.; from stimulants, as brandy, aromatic spirits of ammonia, champagne, the latter acting both by its stimulating quality and by the carbonic acid; from care in diet, carelessness in which frequently produces the earliest symptoms; from hygiene, change of locality, scenery, and occupation.

Those of us who attended the lectures

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of the late Prof. Charles D. Meigs can recall the convincing manner in which he showed us how to combat this trouble, by requiring the patient to take a cup of tea and a piece of toast while yet in bed, only rising sufficiently to rest upon the elbow while eating, and then to resume the recumbent position until the stomach had time to acquire tone to enable her to arise without the nausea.

It is from these trifling cases that we have constantly heralded the wonderful benefits to be obtained by the use of certain remedies, which soon lose their hold on the profession, and are only recalled as a curiosity in the literature of the medical art.

As such cases are of very frequent occurrence, and demand treatment, we may mention those remedies which have proved most successful. Thus, we have prussic acid in small doses; aconite, of which the administration of a few drops of the tincture has been found of great benefit; the use of horseradish scraped fine, moistened with vinegar; arsenic, which is with many a favorite remedy; atropia or belladonna, combined with morphia; bismuth, the subnitrate, or, as preferred by some, the phosphate; calumba, highly extolled by Bartholow and others; carbolic acid, administered in drop doses; the oxalate of cerium, which at one time was regarded as a specific in these cases; chloral, which is usually prompt, and is best given in the form of an enema; chloroform and ether, either in small doses or by inhalation; the latter has proved useful when sprayed upon the spine; creasote, one of the earliest remedies; sulphate of copper, gr. iv. to water f℥j, five or six drops at a dose; hyoscyamia, which is claimed as effectual when all else has failed; iodine; ipecacuanha, which has recently been reported on by several observers, given in drop doses of the wine in a teaspoonful of water, repeated every hour; pepsin, lactopeptin, and their compounds; nux vomica, five to ten drops of the tincture, and recommended by Bartholow where the nausea is great, with little vomiting, in drop doses; the bromides of potassium and sodium, used by Busey in doses of thirty to sixty grains, dissolved in beef-tea, with the addition of brandy and laudanum, if required by the symptoms, and thrown into the rectum every four hours. Friedrich is tempted to regard the bromide of potassium as a specific in one to two grain doses daily.

Recently we have, on most excellent authority, a preparation made of the inner coating of the gizzard of the chicken, dried and reduced to an impalpable powder. In our hands this has frequently acted with great promptness and efficiency. While we may readily, and generally do, succeed in obtaining positive relief for our patients by the employment of some one or more of the above remedies, yet we occasionally encounter a case which obstinately refuses to yield to any remedy by the mouth, everything being rejected almost as soon as it reaches the stomach.

In these instances, the happiest results frequently follow medication by the rectum. Especially do we find this to obtain with chloral, which we have known to act speedily and pleasantly in a number of instances. Perhaps a better plan is the use of chloral, morphia, and belladonna or atropia, combined in a mucilage or in the form of a suppository. In several cases we have thus obtained a tolerance of food by the stomach, and thus we have relieved a threatened death by starvation.

In other cases we have obtained even better results by direct contact of these remedies with the os, and even within the cervix of the uterus.

In one case where, owing to the animal instincts of the husband, the nausea and vomiting were constantly reproduced, we each time succeeded in speedily checking it by passing a suppository of morphia, belladonna, and hyoscyamus up to the os, and keeping it closely applied.

Tanner employs suppositories made of belladonna, gr. iij; hyoscyamus, gr. x; and iodide of lead, gr. viiss.

Injections, both rectal and vaginal, are advocated by many, and Dr. Greene has succeeded with warm olive oil, after failing with warm water. Cold to the epigastrium, small pieces of ice swallowed or passed into the rectum or vagina, have proved serviceable.

As might be expected, electricity has its advocates, and Gaillard Thomas esteems it higher than any other remedy. A broad, flat electrode, made by stitching a flat sponge to sheet rubber, he fixes by means of adhesive plaster on the epigastrium, and a similar one under the spine, the patient lying on her back. A gentle current is passed, and continued for ten or even twenty-four hours.

Da Venezia, in a similar case, after all

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else had failed, used a faradic current of moderate strength, one rheophore being applied to the side of the neck along the vagus, the other to the epigastrium. The patient was relieved at once, and after the fourth application was cured.

J. Marion Sims employs caustic to the os, even when the parts appear perfectly healthy. He claims the best results from this method.

It would appear that this treatment is that which in obstinate cases promises the best results. Especially is it indicated when an examination reveals erosion or other disease of the os uteri. Originally, the sole dependence was upon nitrate of silver, but equally good results are obtained by the glycerole of iodine.

Tannin, carbolic acid, in short, a great variety of remedies capable of relieving engorgement, erosion, or whatever evil condition may be present, have been found to act promptly in relieving the nausea, etc.

From the remarks of Dr. Sims and from the results in general practice it would appear as though all that is required is a means of producing an impression of a positive nature at the real seat of the affection, the os uteri. Hence we find severe cases are frequently at once terminated by ordinary anodyne or astringent injections, applied so as surely to produce their effect upon the os uteri.

While there is no doubt as to the safety of these applications properly employed, it is much to be questioned whether the same may be said of the plan proposed and carried out by some practitioners abroad,—that is, the dilatation of the os with the finger. No doubt such a method would at once relieve the nausea, but at the same time it might be anticipated as extremely likely to result in an abortion. For this reason I would hesitate as to its employment until every other remedy had failed, and the question had arisen whether we should not sacrifice the child to save the mother.

I earnestly believe that the question of premature delivery will rarely, if ever, occur when the treatment which I have so roughly sketched has been properly employed.

In this connection we may allude to the cases, though rare, where the husband has been the victim of nausea, while the pregnant wife was enjoying her usual health. Here we certainly cannot regard it as the result of sympathy between the womb and the stomach.

Before closing the subject of treatment I may mention that Pinard obtained immediate relief in several obstinate cases by the employment of inhalations of oxygen. I am not aware that it has been tried in this country.

A valuable aid, by allowing complete rest for the stomach, is the employment of rectal alimentation. Dr. H. F. Campbell has employed this plan in a number of instances, and with most gratifying results. Twice each day he injects very slowly and gently about eight ounces of beef-tea or some similar nutritious fluid. The advantages are complete rest for the stomach while nutrition is readily maintained. In the intervals between the injections a full goblet of water not quite cold was twice given, so as to supply the requisite amount of fluid.

In conclusion, permit me to sum up what I think is the duty of the practitioner in these cases:

The most complete rest of body and mind.

The avoidance of all forms of diet save those easy of digestion and assimilation.

The relief of the early symptoms by some one of the articles mentioned under the head of medication. Unless prompt relief is obtained, the use of chloral, morphia, belladonna, or hyoscyamus, or their combination, by the rectum or by the vagina. In the latter case it is important that we should first carefully cleanse away the discharge usually found clinging to the os and cervix, and then bring the medicaments closely in contact with the os, and maintain them there by the usual methods.

This failing, apply to the os and cervix, if need be, the glycerole of iodine or the nitrate of silver, and follow this by an application of the anodynes, as before.

If the vomiting is now great, abandon the stomach as a depot for food, and employ rectal alimentation solely. In each injection we may include with the nutrient chloral to aid in procuring complete rest.

To relieve the intense thirst which is generally present, we may allow the patient to swallow at intervals small lumps of ice, or to drink iced carbonic acid water, which is now so readily obtained from the siphon. Of course, just sufficient of this should be taken to relieve the throat at the moment.

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I do not consider the dire alternative of induced abortion, as such a procedure rarely becomes necessary, and should only be employed after the most careful deliberation, and after a council of physicians had decided it to be imperative.

THE DIAGNOSIS OF PULMONARY SYPHILIS: ITS DIFFERENTIAL DIAGNOSIS FROM PULMONARY TUBERCULAR PHTHISIS, WITH SOME REMARKS ON THE PATHOLOGY OF LUNG-SYPHILIS.

BY HUGO ENGEL, A.M., M.D.,

Fellow of the American Academy of Medicine, etc.

APRIL, 1881, Th. B., æt. 32, a man of considerable means, and occupying his time solely with the administration of a very large estate left by his father, stepped into my office, the very picture of an individual suffering from tubercular phthisis in its last stages. Nearly six feet tall, very slim, and of a phthisical habitus, with a pale face, feverish spots on the cheeks, deep-sunken but unnaturally brilliant eyes, flat chest, long bony fingers, and a hollow cough, he seemed to be in reality with more than one foot in his grave already. After a lengthened interview, I elicited the following history:

He had enjoyed remarkably good health up to his twenty-fourth year, when he contracted a chancre. This was soon healed, but was followed by a left-sided inguinal bubo, a syphilitic eruption, patches on the mucous membranes, syphilitic sore throat, and alopecia. Carefully attended by a physician skilful in the treatment of specific affections, B. appeared cured about two years after the first outbreak of the constitutional disease. He grew stout again, and was free, for three or four years, from any further manifestations of the luetic virus. But two years ago he commenced to complain of osteocopic pains, mainly at night. His former physician having died, he now drifted from one disciple of Æsculapius to another. His pains at last left him, or made their appearance occasionally only; but instead an ulcer showed itself over the left shin-bone, which surgeons declared to be due to an affection of the bone, and which was still not healed when I saw him. A year before, in the spring of 1880, he commenced to cough, which he ascribed to having taken cold while out hunting ducks. The cough ceased somewhat during the following summer, but not totally, and returned with greater severity in the autumn. After Christmas he lost flesh rapidly, had irregular fever almost daily, feeling hot in the afternoon and sweating the first part of the night, while in the mornings and forenoons he suffered from cold hands and feet and from chilly sensations. For the last two months he had been spitting blood, and expectorating queer round and flat-shaped elastic masses, mostly of a brownish, but sometimes grayish, color, which, on pressing them between the fingers, seemed to contain harder particles, breaking up under the pressure. The last physician he went to —one of our recognized authorities on diseases of the chest—had given him very little hope, and advised him to go to Florida if he wished to prolong his life or eventually effect a cure.

When I examined him, I detected, on percussion, dulness, amounting to absolute flatness at the left infra-clavicular region; a little lower, on the left side anteriorly, were the signs of a cavity and of breaking down of the lung-tissue. The clearness over the right apex was also impaired. On auscultation anteriorly, left side, hollow tubular breathing, with large gurgling sounds, were heard, while on the right side were prolonged expiration, some crackling, and a few dry and moist râles. The latter were present also posteriorly over both sides. The finger-nails, while not having the clubbed appearance, bore evidence of disturbed nutrition, being dry and broken.

There was no history whatever of tuberculosis in the family; but the case would have been set down by me undoubtedly as one of tubercular phthisis, had it not been for the want of the clubbed appearance of the nails, which I never have found absent in such well-marked cases, and for the peculiar character of the sputa, which I intended to examine microscopically. Besides, the sore on the leg looked to me too characteristic of syphilis. The hæmoptysis was not severe. The blood accompanied mostly the expectoration. About every week B. expectorated half a cupful of frothy blood. The latter then decreased in quantity, and became, as usually is the case, darker, till at last only a little surrounded the sputa, which, however, never were *streaked* with blood. Then a larger hemorrhage came, running the same course.

There was no fetor with these almost prune-colored masses. When I examined them with the microscope, I found the following:

Some of the expectorated matter had a flat shape, looked somewhat convex, and was of the size of the little finger nail. Other pieces, again, were round, and usually of the size of a split pea, or of a whole pea. Their color was mostly that of grayish sputa intimately mixed with more or less blood; it varied, therefore, from a grayish hue to a dark brown. The pieces were all tenacious, somewhat elastic, and might be compared to gum-drops which have been half dissolved in saliva. They were, if anything, a little softer, and did not consist of a homogeneous mass, but of this gum-like cover, with broken-down detritus as contents. They were all of a specific gravity greater than water, and sank to the

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bottom if placed in a vessel filled with water. If they were surrounded by much mucus, which frequently was the case, they would first half swim and half go down. After a while the mucus continued to float on the top, while the other part went to the bottom. The pieces generally held well together, but at the margin parts fell off easily. The microscope showed them to consist of detritus of all kinds, nucleated and granular matter, all heaped together, granulated cells and finely-striped tissue, with many oil-globules. Some spindle cells were seen, and especially some of the pieces, when they contained a great deal of broken-down detritus and cells in every stage of development and of retrograde formation, exhibited plainly the picture which has been so well described as characteristic of lung-syphilis by Lancereaux.* Some of the tissue-rests had an appearance very similar to what we find in gummatous infiltrations of the brain, but then, again, they looked like amyloid degeneration, without, however, giving the color-reaction, and without, when treated with acetic acid, evincing a continuous process of development; but the appearance of the cells was rather as if the active process at some places had come not only to a standstill, but as if retrograde formation had gradually led or was leading to a reconstruction. This could especially be observed on some small fully-developed cells present in a finely-developing tissue or new growth, but not of a morbid character, rather as belonging to the normal lung-tissue, while others, again, plainly gave evidence of a similar beginning new growth, as we find it so abundantly in syphilitic tumors of the brain. Sometimes the cells appeared in a beautiful order with nuclei and nucleoli, and this seemed to start from one common point, like a beginning granulation with plenty of white globules of different sizes; but these latter were rare, and met with only when the regular arrangement of the cells could be observed, when they were seen at the very edge of the specimen.

From the remarkably good description of I. Edmund Güntz† (Dresden), whom we have to thank, perhaps, principally for our present knowledge of this subject, as he has taken the pains to describe one of his own cases very graphically, and has studied also the literature of the subject with unusual care, I have no doubt that the case above mentioned was correctly diagnosticated by me as one of pulmonary syphilis. Moreover, the result of treatment confirmed the diagnosis.

Supposing that I might be wrong,—in which case large doses of iodide of potassium would only have sooner brought about the inevitable fatal end of such a marked case of tubercular consumption, and knowing that B. had never been treated as yet in this manner,—I placed him on mercurial inunctions, rubbing daily in different parts of the body half a drachm of mercurial ointment into the skin. Instead of his getting weaker, the hæmoptysis ceased after the fifth inunction; after the eleventh all fever-symptoms had left him, he suffering instead of these from a more regular fever and occasional sweats, which I knew from experience were due to the impression made by the mercury; his cough had very much improved, and by the nineteenth inunction his phthisical symptoms were so much better that I—especially as a mild degree of stomatitis was developing itself—stopped the treatment by inunction, and placed the patient on gradually increasing doses of iodide of potassium, beginning with fifteen grains three times daily. Six weeks after the commencement of the anti-syphilitic treatment, his condition was as follows:

Temperature normal during the day; 99½° at night; no fever, no cold hands and feet, and no sweats. Cough very mild, coming rarely only, and accompanied by a white frothy expectoration or by none. His weight had increased twenty-two pounds, his appetite and digestion were undisturbed, and he slept well and complained of no pain. The ulcer on the leg had perfectly healed under a simple external treatment besides the internal medication already mentioned (then thirty grains of iodide of potassium *ter die*). Respiration easy, 19 per minute. Percussion normal, except over a small spot the size of a silver dollar anteriorly on the left side, beginning half an inch below the scapula and one inch to the left of the sternum. Here there was perfect dulness, and exactly over this spot no respiration could be heard. Evidently cicatricial tissue had formed on the place of the former cavity. Otherwise, all over the lung, respiration was normal. Only a few râles, moist in character, and coming evidently from a still existing catarrh of the bronchial tubes (perhaps due to the iodide?), were heard anteriorly on the left side over the upper and lower lobe; some few also under the armpit and posteriorly on the same side. Just below the clavicle, on the left side, the vesicular murmur was somewhat feeble and almost bronchio-vesicular in character: at last a faint expiration could be detected by the ear. On respiratory percussion, the dulness over the spot mentioned became still flatter.

A week before writing this article, I visited the patient again, and found him in very good health. He had no cough, no expectoration, and no fever at any time. He weighed one hundred and sixty-nine pounds; had gained, therefore, thirty-two pounds since last report, having weighed one hundred and fifteen pounds only when I first saw him. His temperature was normal. Percussion and auscultation elicited nowhere over the lungs

* Traité Hist. et Prat. de la Syphil. Paris, 1866.
† Allg. Med. Centr. Zeitschr., Nos. 52 and 53, 1882, page 670 *et seq.*, and 686 *et seq.*

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anything abnormal, except over the spot described, and just below the left clavicle anteriorly, where there existed still the same physical signs—dulness and absence of respiratory sound over this spot, and indistinct vesicular murmur, with very slightly prolonged expiration below the clavicle—as had been noted as present at the time of the last report.

Concerning the diagnosis of pulmonary syphilis, we may mention the following points: first, the history of a specific infection, the primary sore, the bubo, and the symptoms and signs of the constitutional disease; then, possibly, the presence of an ulcer, osteocopic pains, or of marks left by cicatrices of former sores; perhaps also the absence of any hereditary tendency, though in the light of Koch's investigations concerning the true cause of tuberculosis this fact cannot be considered as being of great weight. Lastly, all the symptoms and physical signs of tubercular disease of the lung, accompanied always (such has been observed, at least, in all cases reported so far*) by frequent recurrence of a moderate hæmoptysis. But here comes an important point in the differential diagnosis between pulmonary syphilis and pulmonary consumption. In the latter these hemorrhages are not apt to be so frequent. The sputa in the last stages of phthisis (and it is with the tubercular disease in these stages that lung-syphilis is apt to be confounded) are nummular in form, mostly thick, yellow, while those of pulmonary lues are usually brownish or reddish, sometimes gray, and have those peculiarities which we so fully described above. Another point of differential diagnosis is the fact that the clubbed appearance of the nails (due to absorption of the fat-bolster) is, in the last stages of true tubercular consumption of the lungs, never absent (except, perhaps, in miliary tuberculosis, with which lung-syphilis cannot easily be confounded), while in pulmonary syphilis the nails give evidences of disturbed nutrition, but are never clubbed. The last, but by no means least in importance, is the success of the anti-syphilitic treatment, which, while it might only hasten the unavoidable fate of the consumptive, may, and will always, perhaps, save the life of the syphilitic patient, whom it will restore to comparative health.

We may now speak of the pathology of the disease, and mention some other interesting points important to know, and which we mostly glean from the very ingenious work of Güntz, already quoted.

The first important knowledge of the pathology of pulmonary syphilis was gained from the monograph of F. W. T. Pancritius.† Up to that time, notwithstanding clinicians were continuously mentioning cases of this disease, pathologists had done very little. The latter, endeavoring to find a special form of anatomical changes, such as exists in cancer, for instance, seemed to forget that while in cancer the morbid process is one continuously progressing, in syphilis many changes, as the result of the poison, and then, again, under the influence of treatment, must necessarily take place, and that we will find, as the result of the same cause, hyperplastic as well as atrophic processes, with nothing characteristic in them except the changes themselves, from new formations to simple nutritive changes, and to disturbed development, and to retrograde growth of the abnormal alterations. Another cause why it took so long a time before we became acquainted with the real changes taking place in syphilis, was the fact that most syphilitic processes are cured before the individual dies, and lesions in their originality are exceedingly rare to be met with after death.

Notwithstanding the literature of syphilis is perhaps the richest of any one disease, the first anatomical proof of a case of lung-syphilis, which had been diagnosticated in life, is given, according to Pancritius's statement,‡ by Pavlinoff,§ who made the first dissection of such a case, recognized during the lifetime of the individual. To give one more evidence, however, that the apparently most hopeless cases of this kind will eventually get well under correct treatment, Güntz cites another case of his own.‖

The post-mortem appearances are the following. The main changes noted are, besides some new formations, atrophic processes, which go hand in hand with those morbid alterations found in the part which is the seat of the progressing inflammation. The nature of the tissue affected gives character to the syphilitic process; that is, while we find all over the same well-known gummatous perivascular and interstitial in-

* (1) M. v. Cube, Allg. Med. Centr. Zeitschr., 1880, No. 103. (2) Güntz, Allg. Med. Centr. Zeitchr., 1882, 52, 53.

† Berlin, 1881, and Allg. Med. Centr. Zeitschr., 78, 1881.
‡ *Loc. cit.* § Virchow's Archiv, 1866, Bd. 37.
‖ Allg. Med. Centr. Zeitschr., 1882, 52, p. 671.

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filtration accompanying the inflammatory action, the latter's nature depends upon the tissue itself, and is distinguished from simple inflammation due to non-specific causes not only by this infiltration but also by the peculiarity that alongside of the progressing changes, and of new formations based upon these, atrophic processes are noted. The syphiloma, the gumma, and every form of syphilitic action, if in the lung or anywhere else, have these same characteristics. If, for instance, the intima is affected, it first swells, bulges out; a step further, we plainly see cells often in the beginning of regeneration, and starting from different stages, from the simple infiltration to the fatty and granular detritus. In case a cure takes place, the tissue nearest does not go back to the norm, but the cells continue in a former stage of development, and from which later so many different changes may progress *de novo*. Sometimes only accumulating and not fully-finished areolar tissue is formed instead of the former homologous normal tissues. This "resting on a lower grade of development" can be recognized even with the naked eye on the points of ossification of the skeleton in cases of congenital syphilis, and also at the union between diaphysis and epiphysis. This process of atrophy is explained by Güntz as a "checked" development, the normal cartilage not changing fully into bone. The same analogous atrophic process is found in every syphilitic papule again, from the initial induration to the desquamation of the skin. Here the cells of the skin die off before their time, and in all syphilitic affections the same tardiness in development, the same tendency to regeneration, and the same "checking" in the progress forward and backward can be noted. One can observe on the white globules of the blood how they are checked in their development as red corpuscles, and how they carry this same tardiness into the tissues. In lung-syphilis we note the same inflammatory process with gummatous infiltration, the same slowness in the formation of new growths and in the breaking-down of the gummata or the decomposition of the gummatous infiltration, into which the healthy tissues are drawn, the same tardiness in the regeneration. When this process affects very delicate tissues, as the brain and the spinal cord, this checking during regeneration has one bad consequence,—the reformation is apt not to be accomplished thoroughly; and we note, therefore, in spinal paraplegia, or in cerebral hemiplegia, that in the paralyzed foot or leg, though the paralysis was caused rather rapidly to disappear, there is still some little dragging, the morbid process not having totally ceased or the regeneration not being fully established. Thence also the relapses, and the fact that they are apt to be of the same nature as the former seizure, starting from the point where they left off.

It is comparatively very rare to see the disease (pulmonary syphilis) in the well-to-do classes, one reason undoubtedly being that well-instructed physicians generally do not permit the disease to get such a hold of the system that the internal organs become threatened. Why lesions of the nerve-centres due to lues happen so frequently, and why affections of other organs, especially of the liver and the kidneys, and still more so of the lungs, are so much more infrequent, should surprise us the more, as such syphilitic morbid changes in the heart are by no means very rare. That iodide of potassium should have been recommended for the cure of tubercular consumption is difficult to explain, except on the hypothesis that cases of syphilitic infiltration of the lungs (pulmonary syphilis) have occasionally been mistaken for pulmonary phthisis, and the success of the specific treatment warranted, considering the error of diagnosis, the assumption of iodide of potash being a sovereign remedy in tuberculosis.

507 FRANKLIN ST., PHILADELPHIA.

A CASE OF "MOUNTAIN" FEVER.

BY RICHARD COLE NEWTON,
First Lieutenant and Assistant-Surgeon United States Army, Post-Surgeon.

FAGAN, a private, troop D, Fourth Cavalry, aged 23, was taken on sick report at Fort Stanton, New Mexico, November 20, 1881. Diagnosis, "mountain" fever. Patient somewhat emaciated, complaining of constant creeping chills, could not get warm. Tongue, ochre-colored coating, deep transverse fissures dry, Pulse rapid, rather thready. Ordered quinine in average doses. Patient says that he has not been well since he was at Fort Cummings, New Mexico, about the 10th of November, 1881.

November 23, patient seemed worse, was taken into the hospital; quinine increased

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to gr. v every two hours. NOTE.—Until the recent epidemic of typhoid fever here at Fort Cummings, I have since I came to New Mexico usually crowded the quinine in all cases of "mountain" (typho-malarial) fever, with uniformly good results. This case was the first death among the enlisted men or officers; in fact, only the second case of death from fever which occurred during my service at Fort Stanton (two years and four months).

After admission to hospital Fagan seemed to improve gradually. He was never confined to his bed; was brave and cheerful; had a fair appetite; his temperature was never found over 100° F. Tongue began to clean up. This gradual amelioration continued until the 13th of December. The case was not considered as anything more than an obstinate case of quotidian intermittent. On the 13th of December patient asked permission to take a package of medicine to an isolated case of diphtheria; he walked in all about one mile, complained of feeling exhausted upon his return. At 4 P.M. on the same day patient began to vomit furiously; complained of no pain; face anxious and somewhat cyanotic; temperature 102⅘°; pulse rapid and thready. Morphine was given hypodermically, and repeated twice or three times before morning. Dec. 14.—Still obstinate emesis; cracked ice and brandy, sinapisms to epigastrium, and morphine hypodermically, of no avail. Quinine had been faithfully given, gr. v every two hours, since the man came into the hospital, three weeks before. On the 13th a careful examination of the abdomen elicited nothing, no pain anywhere, no tenderness on pressure; no tympanitis, rose-colored spots, or gurgling; the heart was evidently failing; mind clear; disposition cheerful. Ordered digitalis and brandy to be freely administered. This had to be discontinued that evening, on account of emesis.

Dec. 15.—Digitalis, brandy, and beef-tea were given by enema, ordered to be given every four hours, and milk-punch every two hours, if the rectum would retain so much. There was no diarrhœa, and the enemata were for the most part retained, but this provoked anew the emesis, and so thwarted our design of giving the stomach a season of complete rest. Still complains of no pain. Is covered by four or five bed-blankets; pulse 124; temperature 100⅘° in the morning. In the evening, pulse 102, temperature 102⅘°.

Dec. 16.—At 2 A.M. patient passed into a state of collapse; legs cold to the knees; pulse scarcely perceptible; vomiting and gasping; heat and stimulation, however, revived the man somewhat. At 9 A.M. considerably better; pulse 128; temperature 100⅕° F. Moderate singultus; emesis somewhat under control; grew gradually weaker, and died at 9.15 P.M., just after "taps."

Autopsy, twelve hours after death.—Body emaciated; rigor mortis not ascertainable, owing to the extremely cold place in which examination was made. Some sedulation of blood.

Head.—Not examined.

Thorax.—Heart and great vessels normal, to gross appearances, except that the heart-walls were rather flabby and pale.

Lungs.—*Right*, throughout upper and middle lobes there were a few scattered lobular pneumonias, about as large as a filbert, and moderate bronchitis (acute). In the lower lobe, posteriorly, some hypostatic pneumonia. *Left*, much the same as right, except that pneumonias (hypostatic and lobular) were more extended.

On opening the abdomen, an extensive and general peritonitis (acute) was manifested. Bands of lymph, partly organized, lay over the coils of intestine in various directions. Much free serum and pus in the peritoneal cavity. In fact, so general was this serous inflammation that no part of the membrane escaped. There were perihepatitis, perisplenitis, and perigastritis. All the intestinal vessels were engorged, the small intestine particularly, and the stomach and colon also were a brilliant red from congestion of the small vessels. The stomach presented the appearance of acute gastritis; several ulcers, two or three near the pylorus, larger than a split pea: these extended through the mucous coat. I found also duodenitis and ulcers in the duodenum. These were smaller but more thickly placed than in the stomach.

As we approach the cæcum the evidences of inflammation, typhoid in character, meet us. The upper part of the ileum has many prominent solitary glands. In the lower portion the glands of Peyer and the solitary glands are *very* prominent. The former present the shaven-beard appearance near the ileo-cæcal valve. The agminated glands have ulcerated. There are

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several large and deep ulcers quite near the valve, and probably one or more of these ulcers extends through into the peritoneal cavity. (No adequate means of thoroughly examining the intestines were at hand. The extreme coldness of the room has already been referred to.)

Colon.—Vessels engorged; numerous small ulcers of solitary glands.

Spleen.—An abscess occupying about one-third of its area. Surrounding mass soft and pultaceous. Broke it in pieces getting it out. Whole spleen seemed three times its normal size. Color, dark red.

Kidneys.—Normal, but pale.

Bladder.—Not examined. It was, however, not distended.

Liver.—Fatty in spots (probably acute degeneration), otherwise normal.

FORT CUMMINGS, NEW MEXICO.

NOTES OF HOSPITAL PRACTICE.

UNIVERSITY HOSPITAL.

CLINIC OF PROF. H. C. WOOD.

Reported by WILLIAM H. MORRISON, M.D.

CHRONIC MENINGITIS FOLLOWING SUNSTROKE.

GENTLEMEN,—The first case that I bring before you to-day is one of considerable therapeutic and diagnostic interest. The man's story is that he is a laborer, that he was perfectly well until July one year ago, and that at that time he had what he calls a sunstroke, to which he attributes his present illness.

In every case of supposed sunstroke it is necessary to inquire very carefully in regard to the nature of the first attack, in order to decide whether it was or was not a case of sunstroke. A year or two ago we had in this hospital a doctor who had had an extensive practice in Western New York. He was suffering from what had been diagnosed as the effects of a fall from his carriage. After a careful study of his case, I decided that the fall from the carriage was the result of a sunstroke. He had been under treatment for two years before he came here. While delirious, the doctor jumped from a window and was killed, enabling us by post-mortem examination to verify the diagnosis made during life.

In order to recognize a sunstroke, you first inquire as to the weather at the time of the attack; in the second place, if the patient be intelligent enough, you inquire as to the existence or non-existence of fever during the attack, for, as you are aware, there is intense fever in true sunstroke; and in the third place, you ask as to the effect of heat upon existing symptoms. When a person is suffering from lesions following true sunstroke, the symptoms are invariably made worse by exposure to heat, so that in any case where you have a history of increased severity of symptoms from exposure to heat you are strongly led to ascribe the original attack to sunstroke.

This man tells me that he was working in the sun when first taken, and that it was a very hot day. You must not, however, get the idea that exposure to the sun is necessary to cause sunstroke. If the temperature be hot enough, a man may suffer a *coup de soleil* while in the shade. The worst epidemics of sunstroke have been produced by the stifling heat of tropical nights.

Our patient states that everything got black before him. This passed over in a short time, and in a few hours he returned to his work, and we are left in great doubt as to whether there was really any thermic fever. In reference to the effect of hot weather on the symptoms, he says that he is worse in summer than in winter, and that he has been obliged to stay home from work on several occasions this summer.

The symptoms of which he complains are nervousness and a pain in the head. His headache is worse this summer than it has been before.

You see, gentlemen, that we have here a case in which the history is somewhat obscure. There was some kind of an attack during hot weather, and since that time there have been headache and nervousness, these symptoms being aggravated by exposure to heat.

What are the lesions which especially follow sunstroke? There can be no doubt that in many cases of sunstroke the attack passing off leaves only what may be termed a functional sensitiveness. If you could make a critical microscopic examination of such a brain, you would find no anatomical change, but there remains some condition which makes the nerve-tissue exceedingly sensitive to the irritant which first affected it.

In cases in which the sequelæ of sunstroke are more severe, the cortical surface of the

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brain shows evidence of habitual congestion, and there will also be found, more marked in some cases than in others, congestion of the membranes; and in cases in which the sequelæ are at all severe, almost always there is meningitis. In the doctor of whom I have spoken, the membranes were greatly thickened, very much reddened, and well plastered over with lymph.

In chronic meningitis the prominent symptom is headache, and if the meningitis has lasted sufficiently long there is with the headache a certain amount of failure of brain-power. The cortical surface of the brain gets its blood-supply from the brain-membranes, while the internal ganglia receive their supply from the little vessels which come through the cribriform space. This being the case, any inflammation of the brain-membrane, accompanied by exudation and pressure on the blood-vessels, must of course cause disturbances of the circulation in the gray matter of the brain, leading to changes which are secondary to the meningitis. So that when meningitis has lasted for a considerable length of time, or been severe, there are found evidences of brain-failure; but the headache in meningitis is the prominent symptom. If, on the other hand, there be a primary chronic inflammation of the cortical layer of the brain, there may be some headache, but the most marked symptoms are those of mental failure. I doubt if the brain proper is ever the seat of pain, except there be such change as to affect the general intra-cerebral pressure. I have sliced the brains of dogs with a knife without eliciting the least expression of pain; but the moment the membranes were touched, the animals howled and struggled. In the present case, considering the history, the persistent headache, and the increase of the symptoms produced by heat, it seems to me that we are warranted in diagnosing meningeal inflammation following *coup de soleil*. The failure of memory, which is affirmed to be present, indicates that the disease of the membranes has been sufficient to affect the cerebral circulation.

Under these circumstances the treatment is obvious. The first thing to be done, in all these cases, is to keep the patient away from the heat. In the case of a laboring-man, this is of course impossible; but in those who have means, you should make a cool climate the basis of your treatment. I recall the case of a graduate of this school, a surgeon in the United States army. He had sunstroke while in Texas. This was followed by cerebral symptoms, with epileptic attacks. That man would probably have died if he had remained in Texas. I had him removed to the North, and insisted on his remaining there. He has since recovered his health.

Medicines under these circumstances, although necessary, are powerless unless attention is paid to the hygiene. If the meningitis be severe, you may use local depletion and mercury. Directly after the sunstroke this treatment may be required, but when the cases are usually seen, iodide of potassium, persisted in for months, is the proper remedy. Even more important than the drug is counter-irritation; and the best counter-irritant is the actual cautery, used weekly or bi-weekly.

Under this plan of treatment, keeping the patient away from the heat, the use of the iodide of potassium, and the persistent employment of counter-irritation, these cases of the secondary effects of sunstroke usually get well.

SOFTENING OF THE BRAIN.

The next case is one in which the gray matter of the brain, rather than the membranes, is affected. I bring this case in connection with the previous one, so that you may bear in mind the diagnostic distinctions between the two classes of affections. As I have told you, headache is the prominent symptom in meningitis and diseases of the membranes, and failure of mental power is especially characteristic of diseases of the brain.

This patient comes to us without any history. He says that he has been sick for three months; but this trouble has probably been coming on for a much longer time. You noticed that his answers to the questions I asked him were hesitating and indicated a marked loss of memory. The first main symptom in this case is failure of mental power, without headache, or at least without pronounced headache. The mental failure consists in loss of memory, inability to fix the attention, and inability to reason. The only other important symptom that the man has is a local weakness in the right side. You observe when he walks that he drags the right foot to a certain extent, and that when I tell him to elevate his arms he cannot bring the right

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arm to a right angle with the body. There is, then, partial paralysis of the right arm and leg,—*i.e.*, partial right-sided hemiplegia.

The absence of any history increases the difficulty of making the diagnosis; yet I think we know enough of this man's condition to say that he is suffering from some form of brain-softening.

I have not time to-day to go into this subject in detail, but I shall call attention to one or two points. In the first place, the symptoms of brain-softening are those of gradual loss of mental power, eventually deepening into imbecility, along with, in some cases, delirium and a continually progressive loss of muscular power, which is usually more manifest in one part of the body than in another.

Brain-softening may be an almost primary disease (although it probably is never really primary), or it may be secondary, developing around a clot or around a tumor.

The diagnosis of brain-softening is easy if you have the history of the case. If there has been a gradual failure of mental power and failure of motor power without marked headache, along with absence of the evidences of a tumor or other localized brain-disease, you have almost sufficient data for a diagnosis. Remember, however, that in some cases the localized paralysis is absent, while in others it may be very marked. There is another point about these motor symptoms which it is important to bear in mind,—namely, their transient nature. If in a case of progressive mental failure you find that one day the arm and leg are very weak, and the next much better, and the succeeding day the paralysis comes on again, so that you have a series of rises and falls in the severity of the motor symptoms, you have good reason to suspect brain-softening of some kind. This peculiar lack of permanency is almost characteristic of the affection. From what we have been able to learn from this man, there seems to be this variability in the depth of his paralysis. He has either primary softening, or softening resulting from some growth within the brain. I shall probably bring this man again before you for a further study of his condition.

HYSTERICAL BREAST.

This case is one of importance, because it represents a class of cases which are not very rare, and which often are horribly misunderstood and wretchedly maltreated. This is a case of hysterical breast. There has been some talk of having this breast amputated, when really there is no organic trouble at all.

She tells me that she is 24 years old, and that three years ago she began to have severe pain in the right breast, which at times has been much swollen. She has had difficulty in using the right arm on account of the pain in the breast and under the arm. She had an ointment (probably antimonial) applied, which made the part sore; then poultices were used; then carbolic acid; then injections of carbolic acid into the gland; and lastly the doctor and herself thought it would be well to have the lump cut out, but her parents would not consent to this. She states that the lump is more marked at night than during the day.

Examining the breast, I find an exceedingly small lump. The gland is very small. When I place my hand on the breast, it gives intense pain. The tenderness is much more marked on light pressure than on heavy pressure: indeed, she says that strong pressure relieves the pain.

You see how a case like this might simulate a tumor of the breast. Often a lump can be felt in the breast. There is pain in the breast, and that pain is made worse by using the arm. The pain sometimes extends down the arm.

The diagnosis between this condition and organic tumor of the breast can almost always be made by paying attention to the following points. In the first place, in regard to tenderness, the pain is more marked from merely brushing the part than it is from strong pressure. In organic tumor the pain is proportionately increased by pressure. Again, the character of the swelling is an aid in diagnosis. It is a diffused swelling, and lacks limitation. It also varies very much in size at different times. It can be seen at one time and not at another. An organic tumor is persistent in form and hardness. In the neurotic breast the pain is very much affected by the weather and by fatigue. In the present case the pain is increased by stormy weather and by extra exertion.

You notice that this lady has large full eyes with large drooping eyelashes. Whenever you see these in the Anglo-Saxon race, especially in a female, you have a person

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of an hysterical temperament, and a neurotic element will enter into the diseases of such a person. You must always be on your guard not to mistake a neurotic affection for organic disease. This neurotic trouble is seen not only in the breast, but it may also affect a joint, and you have an hysterical joint simulating chronic arthritis.

There is one form of neurotic affection of the breast which is not often alluded to in the books, and which often gives rise to a good deal of alarm. You know that at puberty, when the system is expanding from childhood to womanhood, the breasts swell. If the person be of a neurotic temperament, there frequently is a good deal of disturbance of the part, the breasts becoming swollen and very tender. If both breasts swell at the same time and all the genital organs unfold themselves simultaneously, this condition is not so likely to occasion alarm; but in neurotic young girls there is often irregularity, so that while one breast remains unaffected the other may suddenly grow hot, become swollen and exceedingly tender, developing into a condition very similar to, if not identical with, that of neurotic breast. Some time ago I had the daughter of a physician brought to me suffering from this condition. One breast was small and undeveloped, while the other was swollen, tender, and so painful as to impede the movements of the arm, but the breast lacked the redness of inflammation, the feeling was different from that of a hard, inflamed breast. Moreover, there was no reason why the breast should be inflamed, and, in addition, the child was of a neurotic temperament and at the age of puberty. I therefore told the parents that there was no occasion for alarm, as it was merely an irregular efflorescence.

I have in a number of instances seen the same condition in boys; for even in the male at puberty the breasts will occasionally swell and sometimes secrete a few drops of a serous fluid.

These cases of neurotic breast are usually quite amenable to treatment, but sometimes they are very intractable. The treatment should be addressed to the local disorder, and also to the condition of the system. In many cases a galvanic current will rapidly bring relief. Why this is I do not know, any more than I know why a galvanic current will relieve some cases of neuralgia. The method of application is by placing a large sponge connected with the positive pole over the breast and allowing the patient to hold in the hand a small sponge connected with the negative pole. The current is then allowed to pass for twenty minutes steadily through the part. Great relief will often be experienced at once. When you obtain a temporary relief after a few minutes' application, a repetition of the treatment is almost always followed in the course of two or three weeks by a permanent cure. The current should be of such strength that the patient can feel it and that it will produce redness of the skin without causing pain. It should be applied daily for about fifteen or twenty minutes. The application of belladonna to the breast often affords relief.

The treatment of the neurotic element is the same as you employ in other cases of nervousness with failure of nerve-power. You do all that you can to build up the strength and constitution of the patient. You accomplish this in the first place by attention to hygiene, and in the second place by the use of tonics. You do not use tonics if there are any signs of irritation of the gastro-intestinal canal. In many of these cases there is disorder of the intestinal tract. Do not use tonics in such a case. Tonics are probably the worst abused of all drugs. A person is suffering from debility and disordered digestion; he is immediately put on the use of tonics. This is like trying to put out a fire by pouring benzine on it. You not only waste your tonic, but you increase the gastro-intestinal trouble. Debility is not a disease; a cause for it can usually be found. If you remove the cause, the debility will take care of itself. As there seems to be no trouble with the stomach and bowels in this patient, I shall give her arsenic and iron in combination with some better tonic. In the majority of these cases you will find the best treatment to be the so-called rest treatment, which is a long process of rest, high feeding, and administration of tonics, with what may be called artificial exercise.

THE Pathological Society of Philadelphia has offered a prize of fifty dollars for the best original paper based upon pathological investigation read during the winter by a member who is a hospital resident.

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TRANSLATIONS.

THE TREATMENT OF TAPE-WORM.—Dr. Berenger-Feraud, in the *Bulletin Générale de Thérapeutique* (August 15), communicates the results of the various kinds of treatment for the removal of the unarmed tape-worm, obtained by him at Cherbourg and elsewhere. He reports a decided increase in the number of cases of this kind applying for treatment. As to his results, he states that out of more than a thousand cases under observation, he found that about 79 per cent. had but one parasite, 13 per cent. had two, 5 per cent. had three, and only 3 per cent. had a greater number. From several methods of treatment, he gives the following as the results of his observations:

Spirits of Turpentine.—Out of eight cases in which this was administered, one only occurred in which the head of the worm was discovered. The remedy was complained of by the patients on account of its producing digestive disturbance, and its being extremely disagreeable to take. He regards this method, therefore, only as a palliative, and, as large doses are not without danger, recommends that it be definitely renounced.

Male Fern.—The number of his cases is so small in which this was used that although they were sufficiently successful to give great confidence in the remedy, no final conclusion was warranted, but further experiment was regarded as needed to determine its value.

Pumpkin-seed.—In thirty cases in which this remedy was given, complete success occurred but once, but in twenty-eight others more or less of the worm was expelled without the head. From a larger number of observations it was concluded that this method succeeded completely in about 5 per cent. of the cases.

Kocsso.—This was employed in two hundred and three patients, but in eighteen the result was not known. Out of the remainder, there were twenty-two complete successes, one hundred and twenty-six expulsions of worm without the head, and in thirty-nine there was failure.

Pomegranate-root bark gave about 45 to 50 per cent. of successes in about four hundred cases; but *pelletièrene tannate* he regards as the most powerful tæniafuge which we possess, as the worm was completely expelled in 76 per cent. of the cases in which it was used. The following details of administering the remedy (*Tanret's pelletièrine*) were those adopted by the author, by whom they are considered important, in order to secure the desired result:

"The subject, on entering the hospital, is put on ordinary diet until the presence of the tape-worm joints are discovered in the stools. This proof having been obtained, he is put upon a milk diet,—that is to say, three quarts of milk, and, if needed, about 300 grammes (10 oz.) of bread, for two meals. On the next morning at six o'clock there is given to the patient (who should remain lying in bed during the administration of the tæniafuge) an infusion of 10 grammes of senna-leaves in 100 grammes of water sweetened with 30 grammes of syrup of orange-peel. At seven o'clock the patient takes half the dose of pelletièrine diffused in twice its weight of water, in order that too great a quantity of the medicament shall not rest in contact with the sides of the worm. At seven and a half o'clock the second half is to be given, and the bottle which contained the pelletièrine rinsed out with about 10 grammes of water, which is also to be swallowed.

"The patient, still remaining in bed, should close his eyes and keep quiet, to avoid nausea and vomiting. At eight o'clock, if there is no sickness, or a little later, after the nausea has stopped for a while if it had manifested itself, 30 or 40 grammes of castor oil emulsified with spirit of peppermint (10 grammes) and sweetened water (20 grammes) are to be given.

"If an hour after the ingestion of the castor oil there has still been no stool, a large emollient lavement is to be given, followed, if need be, by a purgative enema (15 grammes of senna-leaves, 30 grammes of sulphate of soda, and 300 grammes of water), and, finally, large emollient injections, in order to solicit the intestine to defecation without delay.

"The subject places himself for evacuation upon a vessel half full of water, with directions not to draw upon the worm in case it is only partly discharged at first. In this event the attendant should give a large injection, endeavoring not to break the worm, in order to facilitate its complete expulsion."

Generally, in one hour after giving the castor oil, a large stool is obtained, in which the chances are that the worm will be ex-

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pelled entire; sometimes it does not appear until the second or third discharge. It may be necessary to increase this dose of senna and oil when patients are known to be difficult to purge, or a second dose of oil may be given at noon. The greatest importance in this scheme of treatment, for success, is attached to the rapidity as well as the energy of the purgative.

A Case of Canities, or Rapid Decoloration of the Hair, in the Course of Violent Neuralgia.—Dr. Raymond reports a case in the *Revue de Médecine* of which the following is an abstract. Mme. D., 38 years of age, of medium size, possessed an abundant head of hair, whose black color contrasted strongly with a very fair skin. She had always been of good health, and, though of nervous temperament, had never had any hysterical manifestation. In July, 1881, she grieved very much over a separation from her son, who was sent away to college, and, although her general health did not suffer otherwise, she could not sleep at night during the month of July and part of August; she then went to the sea-side, where the insomnia was overcome. Last January, after a violent mental shock, caused by learning the result of some unfortunate investments, she became agitated, restless, and soon lost her appetite and sleep; finally she suffered from neuralgic pains in various parts of the body. It is important to add that at the moment she received the bad news the menstrual epoch had begun, but the flow was immediately suspended.

Admitted to the hospital July 27, she was very weak, and suffered from general neuralgic pains, which were worse, however, in the head, the abdomen, in front of the shoulders, and in the tibias. Nothing especially noteworthy was observed upon examination, except that in certain portions of the face and elsewhere there were tender spots (of Valleix), and in the ovarian region deep pressure on each side was painful. During the next few days the pains became much worse, in spite of morphia, bromide of potassium, quinine, etc. On the 31st, the neuralgia of the head was atrocious, morphia was perfectly powerless, and the patient was very restless, crying out, and suffering greatly. At two o'clock in the morning the pains were at the maximum. At this time the hair still had its normal color. In the morning, at seven o'clock, Mme. D. was found with her hair almost completely decolorized. At the sides of the head, and behind, the black color was partly preserved, but it was not so with the other regions. The top of the head showed hairs which for the most part were of a bright red color; they appeared as if burnt or scorched; of these there were a great many, but the others were completely blanched, both in front and at the sides. While the hair of the head was thus rapidly whitened as the result of the severe suffering from neuralgia, that of other regions of the body was not affected at all. In spite of the discoloration of the hair, the headache persisted just as violently as before. She took during the next eight hours ten grammes of potassium bromide, and by five o'clock in the evening she was better, and was able to sleep, although she had not slept before for many nights. Afterwards the pains did not return, but the hair rapidly fell out, so that in a fortnight very few hairs were left upon her head, these being laterally and in the occipital region. She now is obliged to wear a perruque.

[Although questioned by Haller and denied by Kaposi, the truth of instances similar to the above cannot longer be doubted, especially since the publication of the classical paper by Charcot on this subject (*Gaz. Hebdomad.*, 1861). The cases of Sir Thomas More and Marie Antoinette, who became gray in a single night, are well known: they belong to history. Sir James Paget in his lectures refers to another remarkable case, in which a lady subject to nervous headaches sometimes found on the following morning the hair white in patches, as if powdered. This change would occur in a single night, but a few days later the hair gradually regained its color.—Trans.]

Septic Poisoning, and the Scientific Basis of Antisepsis.—P. Zweifel communicates to the *Zeitschrift für Physiologische Chemie* (*Centralblatt für Chirurgie*, No. 32) the results of some very interesting experiments upon the development of septic forms and septic poisoning. The greatest care was exercised to prevent the air from vitiating the results of the observations, which were made upon blood taken from the carotid artery of a dog. Without discussing the details, the results of the numerous observations were, in brief, as follows: (1) Blood kept rigidly excluded from the air at the

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temperature of the body, for a week, showed no signs of putrefaction, but there were found regular micrococci forms in active motion; (2) blood under exactly the same circumstances, except that it had been previously deoxygenated, did putrefy. In another series of experiments normal blood and deoxygenated blood were used for injection into the peritoneal cavity of rabbits. In the first class of cases no bad results followed; in the second the rabbits died of septicæmia. *Normal blood, therefore, by being deprived of its oxygen without being exposed to the influence of atmospheric germs, had become poisonous and had acquired septic properties.* Since the morphological elements did not differ in the two specimens of blood, it also follows that *no pathogenic property is inherent in the organisms found in these experiments, unless these micrococci can form a poison in the blood as soon as there is no more oxygen to be consumed.*

These experiments, made to establish the scientific basis of antisepsis, are most significant and appropriate. The paper concludes with a series in which fresh defibrinated blood was mixed with solutions of the various antiseptic agents so called. A solution of carbolic acid strong enough to destroy the micrococci also produced serious alteration in the cellular elements of the blood. A one-per-cent. solution of salicylic acid prevented putrefaction, but did not retard the activity of the micrococci; but the blood-cells remained without any evident change.

THE TREATMENT OF INCARCERATED HERNIA.—In a communication to the *Berliner Klinischer Wochenschrift* (No. 30), Dr. Finckelstein calls attention to the treatment of cases of irreducible hernia, where an operation, owing to objections on the part of the patient or other cause, cannot be performed. He recommends local etherization combined with other agents, as follows:

℞ Ol. hyoscyami, 10 grm.;
Æther. sulphuric., 60 grm.;
Ext. belladonnæ, 1.50 grm. M.

A tablespoonful of this mixture to be poured slowly upon the surface of the swelling every quarter of an hour. Under these applications, even after previous failure of taxis, the hernia is often spontaneously reduced; in other cases a slight pressure will only be required after several applications have been made to cause it to disappear. During eleven years the author had met with sixty-three cases of incarcerated hernia; in five taxis was successful, in fifty-eight the local etherizations were practised; fifty-four were successful, in four only were the results negative. Of the latter, two were operated upon, the remaining two died without operation. Of the whole number, sixty were male, three female. There were two small (hazel-nut size) ventral herniæ in men, three umbilical herniæ in women, forty-eight inguinal herniæ (one woman, forty-seven men), and ten crural herniæ (men). It is recommended that too much time should not be lost. As soon as it is ascertained that the hernia is irreducible by ordinary taxis, the ether should be resorted to as soon as possible, before the bowel becomes paralyzed.

TREATMENT OF TAPE-WORM BY MALE FERN.—In a communication to the Société Pratique, M. Duchesne stated that he had used the following preparation with uniform success in the treatment of tæniæ:

℞ Ext. filicis maris æther., 4 gr.;
Sacchari, 8 gr.;
Hydrarg. chlor. mitis., 0.40 m.

Make with gelatin and water into a jelly, to be given at one dose to a child five years of age. In adults, he uses capsules containing 50 cgm. of ethereal extract of male fern, with 5 cgm. of calomel, one of these to be given every five minutes until sixteen are taken. He recommends that the patient seat himself during defecation upon a vessel full of water, so that the worm may be expelled without being broken by its own weight. Otherwise it is often difficult to decide whether the head has been expelled or not.—*Journal de Médecine de Paris.*

TREATMENT OF A COLD.—The following is recommended by M. Vigier as a pectoral in place of the nostrums so commonly used:

℞ Syrup. adianti (*s. capillaire*), 200 grm.;
Ext. opii, 0.10 grm.;
" hyoscyami, 0.20 grm.;
" aconiti [aq.], 0.30 grm.

Dissolve the extracts in distilled water (about 3 or 4 grms.), filter, and add the syrup. This is to be taken in tablespoonful doses three or four times daily.—*La France Méd.*, No. 18, 1882.—[Probably the aqueous and not the alcoholic extract of aconite is meant.—ED.]

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PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, OCTOBER 7, 1882.

EDITORIAL.

DEMONSTRATION OF THE BACILLUS TUBERCULOSIS.

BY invitation of the College of Physicians of this city, Prof. J. T. Whitaker, of Cincinnati, who has been investigating the subject in Koch's laboratory, in Berlin, gave an informal demonstration of the reputed bacillus of tubercle, and exhibited a number of specimens at a meeting specially held on the 18th ult.

He introduced his remarks with a short reference to the history of the doctrine of the contagiousness of consumption, giving a *résumé* of the experiments of Villemin, Klein, Cohnheim, Klebs, Chauveau, and others with regard to determining the question of the communicability of tuberculosis, and finally described the discovery of Koch of the tubercle bacillus, and the means taken to verify the supposed fact of its being the primary cause of pulmonary consumption. The means by which this organism can be detected were given in detail. Having a solution of aniline oil, in excess, in distilled water (previously agitated for five hours), add to it methyl violet in alcohol (a concentrated solution) in the proportion of one hundred parts of the first to eleven of the second, which constitutes the first coloring. Then with a platinum probe (rendered aseptic by heat), a small portion of the sputum or tissue is taken up and laid upon a glass slide, which is to be passed two or three times through the flame in order to dry it, being careful not to burn it. Some of the coloring-solution is now placed in a watch-glass, and the glass slide placed on top of it, face downwards, so as to expose the specimen to the solution, where it is allowed to rest for half an hour. The next operation is to decolorize it to a certain extent by exposing it to an acid bath (nitric acid, one part; distilled water, two parts), in which it is immersed and allowed to remain until it is almost entirely decolorized. It is then removed and washed. A few drops of vesuvin are then allowed to flow over the surface, which gives everything a brown color *except the tubercle bacillus*, which keeps the violet color. The excess of coloring-matter is next removed, and the specimen is ready for mounting and examination under a power of from four hundred and fifty to five hundred diameters. A number of beautiful preparations were exhibited under the several microscopes upon the table. The lecturer declared that the bacillus of tubercle might be identified not only by its chemical and physical characters, which were described, but also by physiological experiment. He also explained the method of culture followed by Koch, and the results of his experiments upon rabbits. It was found in the course of the experiments that the tubercle bacillus only thrived in a temperature of from 30° C. to 41° C., and therefore its natural habitat must be inside the human body, especially in the lungs. The pathology of consumption, he believed, may be regarded as definitely settled, its place being among the acute infectious diseases. Tuberculosis means infection by the tubercle bacillus; and the giant cells found in the alveoli, about which there had been much discussion, are now regarded simply as large capsules for bacilli.

The specimens are now in the possession of Dr. Formad, of this city, who will take an early opportunity of presenting them before the Pathological Society and the County Medical Society.

The physiological experiments of Koch are very significant and highly important, since they demonstrate that a disease in certain of the lower animals, strongly resembling the disease termed tuberculosis

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in the human subject, may be initiated by the introduction of tubercular products; and, further, that these tubercular products are much more susceptible of conveying disease than had been hitherto suspected by those who had simply studied consumption clinically. It can scarcely be claimed that they definitely prove that the bacillus in question is the sole cause of tuberculosis, especially in the light of recent experiments, which appear to demonstrate that a disease in all respects resembling true tuberculosis may be engendered in certain animals by the introduction of foreign and non-tuberculous substances. The only discernible difference between the true and the false tuberculosis is that one is communicable by inoculation and the other is not;* but such a remote refinement of a diagnosis is of little use to the clinician when confronted with an individual case of typical consumption. The distinction between a true and pseudo-tuberculosis, which depends merely upon the transmissibility of the disease, will ever remain beyond the reach of the ordinary medical practitioner.

It is also evident that it is only *certain* animals that may be made tuberculous by inoculation. A course of carefully-conducted experiments made in the Pathological Laboratory of the University of Pennsylvania, last year, by Dr. Robinson,† demonstrated that "well-nourished animals do not become tuberculous, and that no cheesy lump could be produced in them," and also that animals in which cheesy masses were not produced failed to become tubercular. Without pursuing the discussion, it appears that the present state of the question might be formulated as follows:

1. Inoculation with tuberculous products (bacilli?) will produce miliary tuberculosis in certain subjects.

2. Inoculation with products other than tubercular will sometimes produce a (pseudo-?) tuberculosis clinically indistinguishable from the inoculated tubercle.

3. Some individuals are insusceptible to tuberculosis by either experimental method.

It is of interest here to observe that in a microscopical study of the blood of tuberculous patients it has been found that there is marked disintegration of a greater or less number of the white blood-cells, the granular plastic contents of which tend to aggregate in masses in the circulation. Dr. Formad believes that those animals which are the most susceptible to tuberculosis have the smallest lymph-spaces, and in individuals with naturally large lymph-spaces it is difficult or impossible to initiate tuberculosis. Syphilis and scrofula cause in the offspring narrowing of the lymph-spaces, and hence create a special susceptibility to consumption.

* Martin, Revue de Médecine, April, 1882; also Archives de Physiologie, 1881.

† An Experimental Research on Tuberculosis, Medical Times, vol. xii. p. 130.

CONCERNING CLINICAL CONTRIBUTIONS, WISE AND OTHERWISE.

THERE is probably no country in the world where the competition in medical journalism is at all comparable to that which is seen in the United States. It is a curious fact, which will serve to illustrate this, that there are published in Philadelphia nearly as many medical journals as in the whole of England, Ireland, and Scotland. When six hundred thousand is contrasted with thirty millions, the proportion is preposterous, even if Carlyle be right in his assertion as to England's being inhabited by "thirty millions of people, mostly fools." Moreover, even on this side of the Atlantic the crops of fools fail not, be the season wet or dry, cold or hot.

The intensity of the competition affects, of course, the subscription-list; but of this we speak not to-day. It affects also, however, the supply of material for the journal. The printer's devil must be fed; the cupboard is often empty; but the exchange-list is full, and by and by the rage of the printing-press is appeased with its fatness.

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Every editor has, however, a horror of resorting to exchanges, and consequently there is apt to be a lively plotting and grubbing to find something which shall appear new, even if it be not new. Under these circumstances, hospital reports and lectures have grown into importance, and that which is the weekly food of a class of students is served up spiced and seasoned so that, if possible, it may sate the palate of the medical gourmand. It is bad enough to think of such commonplaces being published by the ton to vex the soul of the much-suffering Dr. Billings and his index-making assistants; but it is far worse than it appears to be, because lies most foul and misleading are put in the mouths of innocent men. Thus, a well-known medical reporter in this city gets a note or two from some prominent clinician,—or used to do so, for we have not recently followed his career,—sits down to his text-books, and soon fills up his allotted columns with stuff which he thinks the professor ought to have said, if he did not. Under the fertile imagination of this young man, men of repute and knowledge have not only said silly things, but have aided in propagating the most dangerous errors.

Latterly the custom has grown worse. Not long since, we read with open-eyed astonishment a lecture concerning which our memory was blank, but which we were said to have delivered.

As concocted, the lecture was not a bad one at all, and we came to the conclusion that it was preferable to a "romance founded on fact," as many of the reports of lectures really delivered should be headed.

The full remedy for the present state is not easy to see; but one thing is plain,—that every reader should look with grave suspicion upon the report of a lecture in an American journal, unless at least the place of delivery be given, and probably also the reporter's name, and that under no ordinary circumstances in any doubtful or important matter should the report of a lecture be considered as determining the views of the speaker.

Perhaps it is allowable to add that in the *Times* the practice is uniformly adhered to of printing no lecture the manuscript or proofs of which have not been revised or authorized by the lecturer.

HEALTH BOARDS.

THE Provincial Board of Health which was recently established with a view to increased efficiency in the sanitary administration of the province of Ontario has gone actively to work, and shows itself to be in earnest. It has issued a series of notices to municipalities and public bodies calling attention to its own and to their powers in health matters, and freely sent out circulars of information containing valuable advice with reference to contagious diseases. It has also displayed much zeal in seeking and collecting information with regard to local regulations in different districts, concerning details of scavenging and sewerage; and in other ways (not the least of which was sending a representative to Europe with a view of learning from the experience of older boards of health) the board has given earnest of its intention to perform the duties for which it was created.

In the United States there are still a few remaining States neglecting to attend to this obvious duty of securing for their citizens the advantages of some central medical authority, by establishing State boards of health. The list (as given by Dr. Gihon last June) of States still without a State board of health is as follows: Florida, Kansas, Maine, Missouri, Nebraska, Nevada, Ohio, Pennsylvania, and Vermont.

We hope that the Committee on Legislation of our State Medical Society will persevere until Pennsylvania is taken from this list, now growing rapidly smaller. In medical affairs it seems that many that are first shall be last.

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LEADING ARTICLES.

THE LETHARGIC, CATALEPTIC, AND SOMNAMBULIC STATE OF HYPNOTISM.

AMONG the most interesting phenomena of life are undoubtedly those which some hysterical persons present when in the so-called somnambulic state. But, contrary to expectation, contrary to former teachings, and contrary to the general belief, it is the sensory system that suffers least: the motor sphere bears the brunt of the malady. In former articles published in the *Philadelphia Medical Times*, written by myself and others, the researches of Czerny, Tschierch, and Charcot were mentioned, and there were also described the investigations and results of metallo-therapeutics and metalloscopy, where, by the external application of certain metals, hemi-anæsthesia or circumscribed anæsthesia, in hystero-epileptics especially, could be caused to disappear momentarily, and then by the internal administration of the same metal be permanently cured. It was further reported, and is now a well-known fact, that in such hystero-epileptic females, and in reality in most hysterics when suffering from any hysterical seizure, one of the ovaries is usually found specially sensitive, and that the epileptiform attack can under such circumstances at any time be induced to take place, if the sensitive ovary is irritated by pressure. But just as the aura of genuine epileptics is a different one in different epileptic persons, starting here in one and there in another, so we find a different sensitive point of irritation in different hystero-epileptic females; but again, just as there are mainly two auræ in common epileptics, one starting from the lower extremities or from a finger, and one starting from the epigastric region, so there are two main points of special sensitiveness in hystero-epileptics, each causing its own special train of symptoms, however,—one, the larynx, producing the known symptom-complex, the common hysterical seizure with spasm of the glottis and the muscles of respiration, globus hystericus, etc., and the other, the ovary, which when irritated calls out the hystero-epileptic seizure.

In former times many of the phenomena of the somnambulic state were well known. We need only to remind our readers of the mesmerism in Vienna, and of the opera "La Sonnambula." But the symptoms were misunderstood, ascribed to supernatural agencies, and fraud and deceit exaggerated them. In our modern times, when the dissecting-knife of the scientific investigator brings to the light what had been hidden and thriving in darkness, all these phenomena find their rational explanation; and it is to a Czerny, a Tschierch, a Charcot, and a Virchow, that we are indebted for the light thrown upon the subject by these researches.

In the beginning of this year, Prof. A. Tamburini and Dr. G. Seppilli published a series of lectures on hystero-epilepsy* and experimental investigations† upon hypnotism. In these they examined all the phenomena in reference to sensation, motion, the circulation and respiration in the hypnotic condition, which were caused by the usual methods for inducing this state; they described also the different functions during waking and during artificial sleep, and showed the alterations which were produced by æsthesiogenetic and thermic irritations. But all these are more or less known now.

Charcot's still later researches‡ have now, however, carried the investigations further, and proved that there exist different phases in each hypnotic condition. He recognizes the *lethargic*, *cataleptic*, and *somnambulic* states. Tamburini and Seppilli had still their very interesting case of hysteria under observation when Charcot's work appeared, and they had occasion to note these phases especially clearly, and could even analyze them better than Charcot was able to do in his cases, regarding the conditions of their cause as well as concerning the differences which in this state befall the different functions. We have studied these experiments and their results with great interest,§ and, as they clear up many hitherto doubtful questions, and give us a clear insight into these strange but instructive phenomena, we will not withhold them from our readers, especially as ours is the first journal in the English language which reports them.

The main point was to determine if these phases are special forms of hypnosis,

* Irrenfreund, XIV., 1882, Heft 2 and 3.
† Anleit. z. exper. Unters. d. Hypnot., Wiesbaden, 1882.
‡ Sur les divers états nerveux déterminés par l'Hypnotisation chez les Hystériques, Le Progrès Médical, 1882.
§ Beitrag. z. experim. Erforsch. d. Hypnot. bei Hyst., vorläufige Mittheilung, direct übertragen v. M. O. Fraenkel an die Allg. Med. Centr. Zeitschr., Aug. 12, 1882.

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or only apparent differences, depending upon the same original pathogenic cause. The most exact and sensitive instruments were required; especially, however, the graphic method was employed, and the following results were so far attained:

A. *Application of remedies to cause the different phases of hypnosis, or to arrest them.*

It may be mentioned first, that the main differential points by which the three stages of the hypnosis may be recognized, belong to the motor sphere: viz., for the *lethargic* period, the *neuro-muscular hyperexcitability* (shortening or contraction of muscles on simple mechanical irritation); for the *cataleptic* period, the *plastic flexibility* of the extremities, it being possible to bring the same into any position, and in this they continue for a certain time; for the *somnambulic* period, the state of *general rigidity* of all the muscles is specially characteristic.

I. *A priori*, are caused:

(1) The *lethargic* state by the usual hypnotigenic means, as fixation of the look, passing the hand over the face.

(2) The *cataleptic* state by strong and continuous impressions on hearing and vision, as sudden striking of the tuning-fork or the tom-tom, the electric light, etc.

(3) The *somnambulic* state in some patients by any and all hypnotigenic means.

II. *Secondarily*, are caused:

(1) The *cataleptic* state by (*a*) irritation with light, as sudden opening of the eyes in very bright light; (*b*) irritation of hearing by the tuning-fork; (*c*) irritation of the tactile sense by light and repeated touching of the skin. These means cause the transfer from the lethargic to the cataleptic state.

(2) The *lethargic* state by arrest of the irritations which caused the cataleptic state, as, for instance, closing the eyes, etc.

(3) The *somnambulic* state by pressure upon the upper part of the skull, or by means of strong mechanical irritation after the patient has been placed in the lethargic or cataleptic state.

The transfer of one stage to another may also be induced by one and the same means of irritation, but more strongly applied; so, for instance, from the simply increased muscular irritability of the lethargic period to the cataleptic flexibility, and of this to the somnambulic rigidity by longer duration and stronger application of the mechanical and other irritants of skin, eye, ear, etc.

If during the lethargic hypnosis the irritants, which cause the cataleptic state, are caused to act on one side only,—for instance, opening one eye alone or passing with the fingers or palm of the hand over one-half of the body only,—it is possible to produce synchronously the lethargic state on one, the cataleptic on the other half of the body, a hemi-catalepsia therefore, and a hemi-lethargy.

III. The different phases of hypnosis are arrested by,—

(1) The action of means of irritation, which cause the transfer of one state to another.

(2) The repetition of the same irritant which induced the stage, especially the cataleptic.

(3) The application of thermal irritants. Tepid and cold water, and especially ice, arrest the irritability in all muscles, and this the more rapidly, perfectly, and longer, the more intense and continuous the application; the lower, therefore, the temperature.

Unilateral application of these means arrests the lethargic or cataleptic phenomena alone on the side of the body where it is made.

B. *Signs by which differences in function during the phases of hypnosis may be recognized.*

(1) The *lethargic* state is characterized by the following signs:

(*a*) Regarding *motion*, the so-called neuro-muscular hyperexcitability of Charcot,—*i.e.*, contractility of muscles and irritability of nerve-trunks in a high degree with great disposition to contraction, which latter, however, ceases immediately on irritation of the antagonists; sinew-reflexes of high degree with coaffection of other groups of muscles, inclination to Westphal's paradoxical contraction of muscles; reaction of muscles to æsthesiogenic irritants (magnet), showing itself by diffuse contractions.

(*b*) Regarding *sensation* in *deep* hypnosis, anæsthesia of the skin, and analgesia of the same; ageusia, anosmia; but continuance of function of special senses in hypnosis of lighter degree; reawakening of the senses on one-half of the body if the other half has been placed in the hemi-cataleptic state; permanent hyperæsthesia of the organs of hearing, as also of the ovaries.

(*c*) Regarding *respiration:* deep respirations, more frequent than in the cata-

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leptic state; highest sensitiveness to the magnet, which, if brought near the patient, causes profound changes in the respiratory curve (apnœa, very deep inspirations, etc.).

(*d*) Regarding *circulation*, increase of lumen of peripheral vessels (on the lower arm) recognizable by Nosso's plethysmograph and the aërosphygmograph; appearance of undulatory respirations in the pulse-line of the hydrosphygmograph.

(2) The *cataleptic* state is characterized by the following signs:

(*a*) Regarding *motion*, total disappearance of the neuro-muscular contractility and of the irritability of the nerve-trunks; waxen flexibility of the extremities; very apparent diminution of the sinew-reflexes and total cessation of their transfer to other groups of muscles; difficult and slow production of paradoxical contractility of muscles; very moderate or totally wanting reaction of muscles to æsthesiogenic impressions (of magnets).

(*b*) Regarding *sensation*, total anæsthesia of the skin to touch, pain, differences in temperature, as well as of all the other special senses. Disappearance of the ovarial hyperæsthesia.

(*c*) Regarding *respiration*, respirations slow and superficial; sometimes an actual stand-still for thirty seconds; bringing the magnet nearer the region of the thorax does not produce any alteration whatever.

(*d*) Regarding *circulation*, decrease of the lumen of the peripheral vessels as shown by the plethysmograph and aërosphygmograph, and no alteration of the curve of the pulse of respiratory undulatory motions in the hydrosphygmograph.

These differences between the lethargic and the cataleptic state are the more apparent if one-half of the body is placed in the hemi-lethargic and the other in the hemi-cataleptic state.

(3) The *somnambulic* state is characterized by,—

The general muscular *rigidity*, which is easily produced and does *not* cease on irritation of the antagonists; the *sinew-reflexes* are normal; frequently *analgesia* is noted. This same condition is observed in certain cases of hysteria immediately, and without the first two stages being necessary; in the so-called *accessoric spontaneous somnambulism of Tamburini*, which may be induced by any of the usual hypnotigenic irritants.

C. *Explanation of the phenomena.*

It has been already mentioned in the beginning of this paper that the differential points of the different phases of hypnosis are based mainly upon phenomena of the motor sphere; so the so-called neuro-muscular hyperexcitability in the lethargic period, with the easily induced contracture, ceasing on irritation of the antagonists; so the remarkable waxen flexibility of the members in the cataleptic state; and the muscular rigidity, *not* ceasing on irritation of the antagonists, in the somnambulic condition. All these different phenomena, if analyzed for their causing element, are in reality nothing else than just so many expressions of the same neuro-muscular irritability, or, what means the same thing, augmented excitability of the central apparatus for muscular innervation.

The writer of this wishes to mention here only an analogy which, if he is not mistaken, was first reported by Eulenburg. We have in *tic convulsif* first a spasm of the muscles provided by the facial nerve. If now the nerve is divided or stretched, there will be at first paralysis of the parts; but later, during the process of healing, we will observe the same symptoms as in some cases of cortical paralysis: tonic and clonic spasms with contractions, and rigidity, will follow.

And, in fact, the contractions and the contractures, which during the lethargic state so easily appear on simple mechanical irritation of muscles or nerves, are nothing else than the natural expression of the neuro-muscular hyperexcitability. Again, catalepsy, which is based upon a weak and prolonged contraction, is nothing else than a weak contracture, and the somnambulic rigidity finally only a stronger contracture, not disappearing on irritation of the antagonists. We have, therefore, only modifications of the muscular tonus, distinguished from each other only by degrees of strength and by duration. And if we now consider the way in which these modifications are produced, we shall find that they correspond exactly to the degree of strength and to the duration of the irritants employed: contraction by quick, mechanical irritation; contracture by one stronger and lasting longer; catalepsy by weak, prolonged irritation of the organs of sight and hearing, etc.

All these different phenomena of the muscular system must, therefore, not be considered as so many different, separate phases,

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sharply limited, but simply as different expressions of a fact which is characteristic of the hypnotic state,—viz., of the *increased neuro-muscular excitability;* but the latter shows itself in different forms of muscular activity, according to the degree of strength and duration of the irritants which cause them.

The increased excitability during the hypnotic state does not affect the spinal cord alone, as the centre of the muscular tonus, but also the whole cerebro-spinal axis. Not only the central apparatus of the motor nerves evince during hypnosis increased irritability, but the sensory and psychic centres also, as is shown by the facility with which hallucinations and illusions can be produced in hysterical persons during the state in question.

The recent investigations of Babnoff and Heidenhain* concerning the phenomena of excitation and of inhibition within the motor centres of the cerebrum support this view. In narcotized dogs (in which, as in hypnotized persons, consciousness and will are abolished) a slight touch of any part of the body causes increased (electric) excitability of the corresponding motor-cortical centre of the opposite hemisphere; if the irritation was augmented, the contraction also became greater and *tonic*. These facts go to prove that the peripheral irritants they employed to bring out strongly the different phases of hypnosis simply increased the excitability of the motor centres throughout their length and breadth, and according to the duration and strength of the irritants this excitability showed itself as contraction, catalepsy, and contracture. They also explain to us the unilateral appearance (*phenomena of excitation*) and the unilateral cessation (*inhibitory action*) of these different phases under unilateral application of the respective irritants, the action of which necessarily from the spinal cord has to traverse in a crossed centripetal direction the motor path to the cerebral hemisphere of the opposite side, and from there it is reflected along the same path, but in a centrifugal direction, either as *motor impulse* or as *inhibitory action*.

This theory, which by experimental and clinical proofs has become accurate and positive knowledge, explains to us the more important phenomena of the so-called hypnotic phases. If during the so-called lethargic state the eyes are closed, and the muscles relaxed, the central apparatus are simply in the condition of latent excitability, which finds its expression as soon as we cause, with the aid of a mechanical irritation, contraction or contracture, sinew-reflex or paradoxical contracture; the respiration then is regular, and—a peculiarity of the hypnotic sleep, due to this latent excitability extending to the medulla oblongata—accelerated and deep. But hardly have we induced, with the aid of a weak but longer-continued irritant (light tuning-forks, etc.), a weak contracture (*i.e.*, catalepsy) of all the muscles; these lose the faculty to respond to mechanical and æsthesiogenic irritants, which latter during the lethargic state place them into contraction; but, on the contrary, the extremities in consequence of this loss assume their characteristic flexibility and the faculty of continuing in the position forcibly assumed. The respiratory muscles in consequence of their participation in the general condition of weak contracture cannot perform their regular motions so necessary for respiration; the latter therefore becomes slow and superficial, and apnœa is often noticed.

The narrowing of the peripheral vessels at the beginning of the cataleptic state can, according to Tamburini and Sappilli,† be looked at as a reflex of the blood-vessels, caused by the same irritant (touch-, sight-, hearing-, and sensibility-irritant) which induces the transfer from the lethargic state to the cataleptic. This reflex resembles almost the one which in normal sleep is produced by peripheral irritation, and here, according to Mosso, in consequence of increased flow of blood to the brain. Which rôle here the vaso-motor nervous system plays can be imagined, if we remember the symptoms caused by the great ganglia of this nerve when irritated. The same holds good concerning the relaxation following the irritation. The general widening of the lumen of the vessels on return to the lethargic state may be looked upon as a consequence of the cessation of irritation,—*i.e.*, a natural sequence of the re-establishment of the circulatory equilibrium.

As a *résumé* of the whole, we may recapitulate:

Hysterical persons may be brought by certain irritants into a hypnotic state. The latter consists in an increased neuro-muscular excitability of the cerebro-spinal

* Vide Pflüger's Archiv, 1881.

† Loc. cit.

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axis. According to the degree of strength and to the duration of application of these irritants, such persons can be brought into the lethargic, cataleptic, or somnambulic state of hypnosis, but these are not different, sharply-defined phases of the same malady, but simply expressions, differing in degree, of the same increased neuro-muscular excitability, and depending totally upon the different strength and length of duration in the application of the irritants causing them. The functions of the excito-motor as well as of the inhibitory centres of the brain are hyperactive, and travel along the usual cross-paths. There is now nothing supernatural or unexplained in these phenomena; the only uncertain point is the anatomical condition of the centres; but we may suppose that the lesion simply consists in a congestion of the parts, transient in character.

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CORRESPONDENCE.

LONDON LETTER.

MY last letter gave a brief account of the recent jubilee meeting of the British Medical Association, held at Worcester, the city of its birth. In it occurred an allusion to the proposed weekly journal for the American Medical Association, which Prof. Lewis Sayre seems to think is so much to be desired. As others may share his opinion, it may not be out of place for me to give some account of how things stand at present with our Association and its journal, after fifty years of existence for the former. At first the Association had merely Transactions, out of which grew, in time, the *British Medical Journal, being the journal of the British Medical Association*, at the present time *edited for the Association by Ernest Hart*. Mr. Sayre, indeed, seems even more captivated with our editor than our journal, to judge from his remarks, which appeared at some length in our journal recently, —indeed, in the number immediately preceding our jubilee meeting. It is there pointed out carefully that the wisest measure to adopt is the appointment of an editor "for an indefinite term, the engagement to be dissolved by either party only upon three months' notice," allowing the editor the right of appeal, if he chooses. To whom he may appeal does not appear. Now, our editor holds his office for an indefinite period, on three months' notice, per agreement; but opinions differ as to whether this indefinite tenure of office is so specially desirable. How often the three months' notice, like a sword drawn out of its scabbard, is brandished over his head is known only to those immediately concerned therein. Some of us are inclined to hold that a fixed term, permitting of re-election if thought desirable, is an alteration which would also be an amendment. The American difficulty seems to be "the selection of a suitable man as editor," and this they will find to be their difficulty from first to last. The editor, it appears, must be a scholar, a gentleman of profound personal knowledge of every part of the United States of America, and of the requirements of each; of moral worth beyond the possibility of any taint of bias or corruption; capable of all good, and incapable of any weakness, whether wickedness or folly; in fact, a man not likely to be found upon earth until the millennium has been established two or three hundred years at least, and therefore not likely to interest the present generation very much, despite the growing average length of life. If this elaborate description of the qualities of an ideal editor was meant in satire upon our editor, it was cruel, to say the least of it. That he is a journalist of more than average ability is not questioned even by those who do not admire him all along the line. But an ideal editor is one of those things of which the supply is not equal to the demand. At the same time, though England may be growing old, she is not yet so infirm that there is only one man within her four seas who can edit successfully the journal of the British Medical Association, as some of its members seem seriously to believe. When you have captured this ideal editor, it is proposed that his salary should commence at twelve hundred pounds per annum, out of which sum he shall pay his sub-editors. It does not state whether the editor is to draw, in addition, the usual remuneration for all contributions, and allow the sub-editors to do likewise; but if this is not the case, I venture to think there will be either no applications for the post, or the candidates will fall a good way short of the "ideal" craved after. This wish on the part of a certain section on your side of the water to start a weekly journal in close imitation of ours is evidently acceptable flattery to our editor and others who believe they have "successfully carried on the affairs of the Association," from the full report in our journal. The only question at issue here is, "Are the affairs of the Association carried on satisfactorily?" That is just the rub! Those who are conversant with the internal state of our Association could tell Prof. Sayre that it is at the present time just seething with dissatisfaction,—with notices about the relations of the Association with homœopaths, about reports of branch meetings being delayed and shoved into small type, about the constitution of the Journal Committee or that of the Parliamentary Bills

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Committee, about the term of office for the editor,—thick as blackberries in autumn. We are not at present a happy united family, and perhaps it may be well for our enthusiastic admirers in the United States of America to know something of the other side of our Association than that roseate view they may see presented to them in the pages of our journal. The President, in his address at Worcester, said, "Our Association must have a future as well as a past history;" and he had his doubts as to what it might be, for he continues, "Either our Association will become a body nearly coextensive with the profession itself, —a mere name, in other words, for medical men, with a journal, perhaps, as its organ of speech, and nothing else; or it must become a great but select Society, every member of which must conform himself to its fundamental rules and motto." Yet his cry, as well as that heard everywhere else, is for "new blood" in its executive. He hinted at changes to be brought about, and went on, "When the Consultative Council of our Association shall have become in fact, as it is now in theory, really and perfectly representative by the more intimate communion with the Branches;" a sentence which is suggestive that all is not as perfect as it might be.

Just let us see what one of the present ruling bodies—which the President states is not "in fact, as it is in theory, really representative"—chose to do at this jubilee meeting. A reform in the constitution of the Journal and Finance Committee was proposed, when the President of Council—the chief bashaw—urged, "Would they, as sensible men, desire to change the committee every three years, and intrust the work to those who perhaps had not given it a thought?" Would "sensible men" be likely to intrust important work to men who had given no thought to the matter? or would men who had any self-respect engage on a duty for which they were consciously unfit, in the sense of being unprepared? Such *ex parte* pleading, such begging the question all through, that nothing can be so good as that which already is, met a fitting response in a slight modification of the motion; and these "sensible men" decided that some "new blood" was desirable, by voting that three members of this committee retire annually and be not eligible for re-election for two years. In other words, the Association, in general meeting, declared that it was not satisfied with the present committee and its doings, and that some change was called for. The President evidently gauged the present state of affairs correctly when he stated that the present Council was not really representative. Then, again, when a request was made, signed by fifty members, according to the original articles of the Association, what happened? According to the articles,—"upon the receipt of such a requisition, the Committee of Council shall forthwith proceed to convene a general meeting." The President said that, for the well-being of the Association, "every member must conform himself to its fundamental rules;" and if the Association has any fundamental rules, surely they are "The Articles of the Association" laid down by the founders of it. The published decision of the ruling powers was that, instead of such extraordinary general meeting, "a sitting of the Public Health Section will be especially set aside for that purpose;" but the men who headed the movement against "the compulsory notification of infectious disease by the medical attendant" stood their ground, and the matter was carried ultimately to a general meeting. But of that anon. Why the Committee of Council did not set the desirable example of loyally obeying their "fundamental rules" is best known to themselves.

That the management of the Association might drift into the hands of a clique, or be usurped by a knot of adventurous spirits, was not only foreseen by the original founders, but they provided safeguards against such contingency. No By-Law shall be altered except in general meeting at the annual gathering, and then only after two months' notice. If its affairs get entangled, the Association at large has only itself to blame. Humanity has its foibles, and one of them undoubtedly is this,—persons in power like to use it and to keep it. That is one of the little ways of this world all round it. And, further, the said "powers that be" believe that nothing could be better than their own doings, whatever other people may think on the subject. An oligarchy has an inherent tendency to become a mutual admiration society. It would be surprising, were humanity constituted otherwise, how it could happen that the Association is writhing with dissatisfaction and unrest under management which believes itself to be faultless perfection, and which excites a spirit of emulation in the bosoms of some of your chiefs. That phœnix of an editor may possibly be found by Prof. Sayre; but that is not itself all that is requisite. All shortcomings, all iniquities, all acts of omission and commission; cannot be laid at the editor's door! An editor may be all that is desired,—able, disinterested, most wishful to follow a distinct course; but how about the pressure to which he may be subjected? Amidst the ruling oligarchy may be sundry individuals whose wishes cannot be disregarded, even when they ought properly to be ignored, and who can bring a leverage to bear upon the editor which will affect him, even though he be as steady as a rock. How would Lewis Sayre undertake to provide against a contingency of that kind? What guarantee would your "Admirable Crichton" of an editor (when you had secured him) have that even among those select spirits who appoint him there might not be some who might seek to utilize him and the journal in their own interests from time

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to time? Even the little knot of apostles had its Judas Iscariot,—the one so trusted that he carried the bag! Then, when an editor's ability becomes admitted, the temptation to push himself naturally follows. What is to prevent him from becoming ubiquitous? He can be very useful, no doubt. Now, besides his official position as the paid officer of the Association, our editor is (1) one of the Council of the Metropolitan Branch, (2) one of the Medical Reform Committee, (3) a member of the Joint Committee of the British Medical and Social Science Associations, while he is (4) the Honorary Secretary of the Scientific Grants Committee, and, further, (5) he is the Chairman of the Parliamentary Bills Committee. Everywhere, whether as editor or in some other capacity, the present editor can make himself felt. Nothing, almost, can go on in the Association without his finger being on the pulse of the movement, while of course his word, as editor, can be for or against anything; and both he and others are aware of this fact. Whether your admirers of our existing state of matters would wish to copy this particular item or to avoid it in their arrangements is best known to themselves.

A little tale, which carries some instruction with it, may now be related for the guidance of Prof. Sayre & Co. The Parliamentary Bills Committee was founded "to watch all bills affecting medical interests before Parliament, and to take action to support or oppose them as they may be considered by the medical profession at large to advance or assist medical interests, or, on the other hand, be injurious to them;" and of this committee our editor is chairman. How far this committee has been loyal to the trust reposed in it may be conjectured from a pamphlet issued recently by Dr. Carter, of Liverpool, who opened the discussion on the Notification of Infectious Disease at the last general meeting, on the Friday morning, at Worcester. From this it would appear that their idea of maintaining the honor and dignity of the medical profession was compatible with their advocating the *compulsory* notification of all infectious disease by the medical attendant, under "a penalty of ten pounds for an act of omission." The natural objection of the medical profession to this scheme was designated "extreme sensitiveness." Of course the offending medical man must obey the old legal dictum, and "pay in purse or in person,"—*i.e.*, if he objected to pay the fine, he had the alternative of going to prison. The committee, it seems, even went the length of offering its services to sanitary authorities seeking acts, with this "model clause," which, it is said, was suggested by "the chairman's report." Dr. Carter indignantly writes, "And forthwith, without the sanction of any higher authority, without a word of assent, this committee *did* distribute the report, and *did* offer their assistance to sanitary authorities through the country in their efforts to impose fine, and, in the last resort, something worse, on the entire body of general practitioners, if they should decline to do what most of them thought it would be wrong to do." The committee went on its way, but at this point the profession began to think it was high time to be stirring in the matter. Ireland had a plébiscite on the subject, and by an overwhelming majority gave an emphatic negative to the objectionable proposition. England is now at large. Dr. Carter writes, "Within the last three or four weeks only, without any extra effort being made, without the issue of a single advertisement, hundreds of medical men—indeed, hundreds upon hundreds of members of this Association—have united themselves into a distinct society, having for its object to resist the attempts to fetter them with penal legislation that are persistently made by this committee, which affects to represent them, acting through the medium of a journal which is supported by their moneys." Compulsory notification of infectious disease is highly desirable; on that all are agreed. But the medical profession does not see that it follows that it should be made the instrument of the sanitary authorities. Such a scheme of making them part of the State police would have been objectionable enough if suggested by some lay member of Parliament; but that it should be the device proposed by the editor of their own journal, acting as the chairman of the committee founded to watch over the interests of the profession, was simply intolerable to that profession, and especially to the general practitioners who were threatened by this "model clause." Squabbles might go on in the general meetings of the Association, which helped to enliven the tedium of their ceremonial formalities, but the general practitioner was indifferent about them, or took but a languid interest in them. He came up to attend the annual meeting for a holiday, to combine recreation with the seeing and hearing of what was going on; but it could scarcely be expected that he was to be bothered by taking any part in the squabbles going on. But a plan had at last been hit upon, however free from design in that direction, which did rouse his attention. As soon as ever his own particular corn began to feel a pinch, then he began to waken up to the fact that, after all, the great bulk of the Association did consist of provincial practitioners. Schemes might be set on foot in London to utilize him, but he was going to have a word to say himself now, when the matter in dispute came home to him and he found out that he was being taken care of by his guardians in a manner which was not acceptable to him. So the first skirmish came off at the last general meeting. Dr. Carter led the attack, followed by Dr. Whittle, of Liverpool, who held up a petition, signed by several hundreds of Irish medical

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men, against the action of the committee. Dr. Littlejohn, the well-known police-surgeon of Edinburgh, then told how the compulsory notification of disease worked in that city, and proposed an amendment to allow the Parliamentary Bills Committee to go on as before. Dr. Alfred Carpenter, of Croydon, thought the householder the proper person to notify the sanitary authorities. Mr. Hastings, M.P. (son of the late Sir Charles Hastings, founder of the Association), explained that compulsory notification by the medical attendant did away with any objection the householder might entertain to the sanitary authorities' being informed of the existence of infectious disease in his dwelling, and so really protected the medical man; and with this view he adopted such compulsory notification of disease in the bill he proposed to bring before Parliament. If the medical man had no choice, he must act. Dr. Fitzpatrick, of Liverpool, pointed out how, if all medical officers of health were fac-similes of Dr. Littlejohn, enjoying well-won reputations, and holding independent positions, not being engaged in practice, the objections to the scheme would fall through; but where the conditions were totally different these objections were valid enough. The debate was able and earnest on both sides. If the action of the Parliamentary Bills Committee was condemned, it was not without their having a hearing, and, indeed, being eloquently defended. The plan which worked well in Edinburgh may not be so well adapted for the rural communities at large. The verdict was, on Dr. Mahomed's amendment, that "the compulsion to notify" should lie with the householder, and not with the medical man. The action of the Parliamentary Bills Committee was repudiated by the profession, as tested by the British Medical Association in general meeting assembled. The policy pursued for some time past was condemned and practically censured by this vote. The chairman of the committee then brought forward its report. "The vote which had just been passed by the members of the Association gave to the committee a new instruction, which he could promise would be carried out as loyally as previous instructions had been, so far as they were understood." This was a pleasant way of putting it; a "new instruction" was a euphonious phrase for what to most minds would be a clear vote of censure on the conduct of the committee in the past. The instructions would be carried out loyally, like others, "so far as they were understood." That was a saving clause which had a monstrously ominous sound about it.

The new Association, which has been called into being on the *quis custodiet custodes* principle, will do well to keep up a keen outlook, and be prepared to strike promptly, if required. The history of the past does not contain much promise or afford much assurance as to the future. The Parliamentary Bills Committee took up its "model clause" without consulting the profession. It went on with it when it had been negatived by such of the profession as spoke out. Now that the British Medical Association has declared its mind, we shall see what will follow,—what will next be done.

This is an instructive little anecdote for those who desire to assimilate the working of the American Medical Association to the executive of our own, especially in relation to an indefinite term of office for the editor, and they will do well to take it to heart and ponder over it. They perhaps may find that their phœnix of an editor may become practically their master, and that if they do not profit by this lesson their arrangements may drift into a condition calling imperatively for energetic action. I said to Dr. Carter, "You will either *mend* the Association, or you will *rend* it." He honestly hopes to mend it, and the best hopes of all its well-wishers go with him. That the management of the Association needs mending (despite the confident belief of the President of Council) in the existing executive is clear. Nevertheless, the other possibility is something more than a mere shadow. The campaign is begun only, not concluded yet. The issue of the present complications must be awaited before any conclusions can be drawn. This is the first time in the history of our Association when its members have risen in successful revolt against its leaders. What the next move will be remains with the latter. Their conduct will determine that of the new protective association. Like the French political leader, the Chairman will have, probably, to *soumettre* or *démettre* himself, or perhaps himself and the Parliamentary Bills Committee bodily; or, if they can hold their own, a secession on a large scale from the present Association may be looked for as not impossible. If Prof. Sayre and those who think with him are open to a word of advice from one who has no other than good wishes for the medical profession in the United States of America, it would be to the effect that they will be wise in maintaining an attitude purely expectant at present, and watching the course of events here attentively before they commit themselves to any positive action. The British Medical Association is a body of great numerical strength (so large, indeed, as perhaps to be growing unwieldy); but whether it possesses enough of cohesion to deliver itself from its rulers is yet uncertain, to say nothing of its exercising any influence outside itself. That it has done some service in the past may not be denied; but there are many, from the present President downwards, who feel some questionings as to what its future history will be. One thing is quite clear: the great body of the members must be induced to take an active interest in its working. Otherwise, of course, a small body will secure the editor, get the

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reins into their hands, and carry the Association with them, except when some burning question rouses a spirit of activity. We are passing through a crisis in our history; and your Association might wait and look on at present, without feeling that it is wasting time.

J. MILNER FOTHERGILL.

PROCEEDINGS OF SOCIETIES.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

A CONVERSATIONAL meeting of the Society was held on Wednesday evening, September 13, President Horace Y. Evans in the chair. Dr. Wm. B. Atkinson read a paper on "The Prevention and Treatment of Vomiting in Pregnancy." (See page 1.)

DISCUSSION UPON VOMITING IN PREGNANCY.

Dr. O'Hara said that the list of medicines was large, but he would add one more, as a medical friend, whose business is largely composed of cases of lying-in, stated that in every case of sickness of pregnancy he has failed in everything but the use of lager beer. As to himself, he has relied on infusion of calumba, but he thinks nothing is of special service,—that it is somewhat of a necessary evil attendant upon the condition, and will adjust itself. A similar ailment is the salivation of pregnancy. In one case of a person becoming pregnant in advanced years, it was almost alarming, but disappeared of itself in about six months' time. In this case nothing would relieve the copious flow of saliva.

He would like to have seen the pathology of the affection more closely gone into. In mild cases of vomiting of pregnancy, nervous disturbance, due to altered condition of blood and to local irritation, was frequently present. But from the similar clinical symptoms in curable cases of Bright's disease of the kidney, he feared that there was a groundwork of trouble in the kidney, and he desired to ask the experience of those present whether severe and inveterate cases were not generally accompanied with renal trouble.

Dr. Hewson had seen great benefit from the application of tincture of eucalyptus to the os uteri. He did not agree with Dr. Atkinson as to the use of morphia, as it was apt to aggravate the symptoms on the following day. Tincture of avena sativa, fifteen to twenty drops, at bedtime, had succeeded frequently when administered *per orem*, even in violent cases, and more so than any other remedy in his hands.

Dr. Albert H. Smith expressed himself as much interested in the important subject of the paper, but had expected it to contain some discussion of the pathology of the affection. Upon such knowledge, in this as in all other affections, rational treatment could alone be based. He had long regarded the affection as one of the neuroses of pregnancy, and not as arising from disordered condition of the stomach or bowels. The condition was not one of dyspepsia, for cases of the most violent type occur with no evidence of inflammatory or other gastric trouble, except the mere nausea. As confirmatory of its neurotic origin is the fact that it is almost exclusively observed while the uterus is a *pelvic* tumor, during the first three and a half months of pregnancy, while it is dragging upon the hypogastric plexus and disturbing its relations: when the uterus rises above the pelvic brim, and becomes an abdominal tumor, the nausea is relieved in a large proportion of cases. In the vast list of remedies enumerated in the paper just read we observe that most of them are such as are applicable to neurotic and not to gastric disease. The hygienic and mental treatment is also confirmatory of this view. Dr. Smith thought highly of Dr. Meigs's method of requiring the patient to rise early, take a cup of coffee, and follow it by a short walk. Many patients will feel afraid that they will vomit in the street; but this never occurs. The mental and moral effect of the patient being out in the street among people and with diverting objects around is very effective. The inhalation of oxygen probably acts similarly,—it gives a new and unaccustomed sensation and breaks up the train of nervous impulses. With Dr. Atkinson, he condemned the use of dilatation as dangerous. Abortion also was dangerous, and not justifiable from the clinical experience of the highest authorities. Sometimes the kidney is diseased, and this is found to be so in many cases when the condition is intractable. Dr. Smith had found sodium bromide the best remedy: he had seen it succeed when in former pregnancies everything had failed. He gave it in doses of two or three drachms daily, reducing afterwards to fifteen grains. When the remedy was stopped the nausea might return. When sodium bromide failed after a fair trial, examination had generally revealed a granular os uteri, and cauterization would be necessary in such cases. Rectal alimentation was often highly appropriate in obstinate cases. He had used it with success in one case for several months.

Dr. Parish said that many of the milder cases required no special treatment. The more violent forms occurring in pregnancy are generally associated with pathological conditions of the uterus; but not always, because ulcer of the stomach occurs during the course of pregnancy, as also does heart, brain, or kidney disease, and would give rise to vomiting. Generally, however, the bad cases are associated with such troubles as hyperæmia of cervix, anteflexion, retroflexion, etc., ante-

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or retroversion, or simply prolapse. We may have merely cervical congestion, with or without erosion. When uterine troubles are recognized, the line of treatment is very plain: relieve the uterine condition. Dr. Atkinson, he thought, did not refer to local depletion of the cervix. Leeches were not suitable for this, but he had used the bistoury with much success. Silver nitrate might be used after the incision,—even the solid stick, if carried lightly over the os tincæ. One case which he treated in this way had been cured. It was important to note that in most cases of obstinate vomiting in pregnancy, obstinate constipation is a frequent symptom. In one case the bowels were unmoved for two weeks. No displacement of the uterus or other mechanical obstruction existed. The bowels were finally opened by the use of resina podophylli, in powder, placed in small quantities upon the tongue and allowed to dissolve. Conditions of constipation will of themselves cause or keep up the vomiting, and must be attended to. Dr. Parish agreed with other speakers in disapproving of abortion.

Dr. Ranck recalled a case which had been under his charge, in which the vomiting and constipation had been very obstinate and had resisted many remedies. Finally, the buckthorn (*rhamnus catharticus*) was used with success. The constipation was broken up and the vomiting ceased.

Dr. Horace Y. Evans was disposed to associate the vomiting in pregnancy with sea-sickness, both being of reflex origin. He recalled four cases of obstinate vomiting which he had seen on shipboard, two in pregnant women, two in women not pregnant. None of the patients had been sick until they got to sea, and they continued sick with similar symptoms until they again reached land. The treatment he usually adopted was simple, and resembled that which he adopted in sea-sickness. He placed the patient on the back and bandaged the abdomen tightly, even including the thorax. He rarely used rectal alimentation.

Dr. Wm. T. Taylor said that he had tried a great variety of remedies, including oxalate of cerium, pepsin, bicarbonate of soda, morphia, bromide of sodium, and one-drop doses of wine of ipecac every hour, etc., but in his hands only one method had been successful. This was the use of bicarbonate of potassa with fresh lemon-juice, given in mixture every half-hour, *whilst effervescing*, and an injection of one drachm of the bromide of potassium in half an ounce of water at bedtime.

Dr. Wittig pointed out that vomiting during pregnancy was not always due to the individual uterine condition, but may also be caused idiopathically by direct lesions of the stomach. The disorder must then be treated, correspondingly to the local affection and the general nervous irritation, by the administration of the neutral mixture and bitter-almond water, or extract of hyoscyamus, perhaps with potassium nitrate; when the case is rather inflammatory, cold or warm applications to the stomach, etc. If the case, on the contrary, is owing to a greater uterine irritability from congestion or inflammation of the implicated parts, or from general debility, the treatment must endeavor to relieve the hyperæmic condition and support the constitution. In general, the administration of diluted sulphuric acid, together with tinct. ambræ, is extensively used in Germany in the cases not attended with uterine congestion. In prolonged cases we may apply mercurial ointment, with ol. hyoscyami sem., wet compresses, or leeches, to the region of the ovaries; while in cases of general irritability and debility, tinct. ferri acet. æther, with a few drops of tinct. vanilla or creasote, with sulphuric ether, are most beneficial.

Dr. Shelly said that his experience in these cases related only to the use of ingluvin, which he had originally brought to the notice of the profession, and had used for thirty-two years, although it had not been used by physicians generally until within a few years. In his judgment, it was, if used properly, just as much a specific as quinine in intermittent fever. It should be administered before meals, and it was necessary in obstinate cases to give it before rising in the morning. The result with this remedy shows that the cause is not necessarily a local one only; he is satisfied that in a large majority it is neuropathic. The *modus operandi* of ingluvin was not as yet explained, but in his experience it acted as a tonic and soothing remedy on the mucous membrane of the stomach and bowels, and also as a nervine.

He also used it in cholera infantum and cholera morbus, with good results. It was one of the best remedies in dyspepsia, and in all forms of nausea and vomiting.

Failures which physicians had experienced with the remedy were entirely due to the improper preparation of it. Druggists often sold an article prepared by themselves in an imperfect way, as the process of manufacture is difficult and requires the aid of machinery. No one should use ingluvin unless satisfied that he has a good sample. He felt sure that a fair trial with the remedy would place it above all others. He remarked that very large doses were unnecessary.

Prof. Henry H. Smith thought that the great question to be studied was, What is the pathology of the disorder? Only by answering this could rational treatment be secured. The long list of remedies mentioned by Dr. Atkinson served to show that in most instances physicians were guided by the symptomatology and not the pathology of the affection. We must also make a distinction between cases which have different characters and require different remedies. To illustrate by example: neuralgia in its simpler forms might be treated

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by local and simple application; but if it were dependent upon malaria or dental disease, the proper treatment would be addressed to these causes. So in the vomiting of pregnancy, the milder cases might yield to treatment addressed to the stomach; but a vaginal examination should always be made, and if cervical congestion or erosion was found, we should treat this condition. The application of a strong solution of silver nitrate (60 grains to f℥j of water) by means of a camel's-hair pencil was recommended in cases of so-called ulcer of the os, and half that strength in marked congestion.

Dr. Mills had found cerium oxalate and potassium bromide the best remedies in light cases. Some years ago he had presented to the Society the result of clinical study of the former remedy. In regard to the pathology, it must be noted that in the fourth ventricle is a point which when irritated will cause vomiting. The vomiting of pregnancy is probably a cerebral, not a spinal reflex, the arc including the pneumogastric. As to the cases in which the husband was affected with vomiting during the pregnancy of the wife, although such occurrence might seem absurd, he had at least two instances in his own experience. Such cases are due to powerful cerebral impressions. As bearing upon the pathology of the vomiting, he referred to a case of tumor of the cerebellum pressing upon the fourth ventricle. This case was the most persistent one of vomiting that he had ever seen. Nothing controlled it but a strong current of electricity to the limbs. The patient was relieved for a time, but relapsed and died.

According to the intensity of the peripheral irritation would be the intensity of the cerebral response. When the uterus is in the pelvis it drags with more force upon the pelvic nerves. This would account for the fact pointed out by Dr. A. H. Smith, that the vomiting generally abated when the uterus became an abdominal tumor.

Dr. Hamilton said it was apparent that little was known of a special successful treatment. He had failed in many cases. Brandy, alone or mixed with a drop of creasote, was at times useful. He made it a custom to inquire whether patients had special preferences for certain remedies, and used such only as were most agreeable to the stomach. He would like to inquire of those who had large experience in the matter whether the most frequent and severe vomiting did not usually occur in the first pregnancy. Many of the cases he had seen had been in young women in the finest physical condition, and he believed the trouble was essentially nervous and only to a limited extent dependent upon congestion, inflammation, or ulceration of the neck of the uterus.

Dr. Eskridge thought that if the original irritation was carried up to the brain, and returned by the pneumogastric, it should affect the liver, kidneys, and other organs, as well as the stomach. In some cases of the most violent vomiting he had found no other organ disturbed at first. Even the heart was entirely normal. Of course, various organs are affected in pregnancy, but most of them secondarily, the stomach seeming to bear the brunt early in gestation. The rule of reflex action was, the greater the irritation, the more extensive the reflex. He thought that the anæmic element in these cases had been overlooked. He had found Dr. Meigs's plan of taking a short walk before breakfast good not only for the vomiting of pregnancy, but in other cases of stomach-irritation not attended by organic change.

Dr. Albert H. Smith said that the stomach is not by any means the only organ affected in pregnancy. The heart-troubles of pregnancy are well known: Angus Macdonald has written a valuable monogram on the subject. We see also liver-troubles, albuminous urine, etc. He did not agree with the view that the uterus is always diseased in the violent cases, but rather confirmed Dr. Hamilton's statement that he had seen most violent cases in women in the best of health. In many cases the vomiting had been severe in first pregnancies in perfectly healthy women, and less so in later ones, although in the interval the uterus had become the seat of disease. Further, if uterine disease were the cause, why should the trouble so generally cease when the uterus becomes an abdominal tumor?

There is no doubt, however, that chronic inflammation of the cervix, with erosion of the mucous membrane, aggravates the condition, and in such cases treatment applied to the cervical lesion is very useful and often necessary. That this peculiar condition is connected with changes in the cervix very largely may be accepted as a fact; but that those changes are mainly physiological must also be accepted.

Dr. Eskridge said that he was aware not only that heart-disturbances were often associated with pregnancy, but that the subject had received the attention of a special treatise; but it must be noted that Macdonald had in that treatise advocated the view that such heart-troubles were anæmic in origin, and not the result merely of reflex action from the pregnant womb.

NEW YORK PATHOLOGICAL SOCIETY.

REGULAR MEETING, SEPTEMBER 13, 1882.

DR. E. C. SEGUIN, President, in the chair.

ABSCESS OF THE LIVER IN A CHILD.

DR. G. M. SWIFT presented the specimen, which was removed at the New York Foundling Asylum from a child æt. 2 years and 10 months. The nurse said the child had been well until February last, when it took scarlet fever and diphtheria. From these

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affections it made a fair recovery, and remained well until about the 20th of August, at which time it was treated for entero-colitis until September 4. It was then brought to the asylum in a state of collapse. The respirations were thirty-two, the pulse was too frequent to be counted. There was an effusion in the right pleural cavity. The liver seemed to be enlarged, but it was thought this might be due to displacement by the pleuritic effusion. The child died a few hours later, and an autopsy was made next morning, when a large amount of serous fluid containing fibrinous pus was found in the abdominal cavity; the liver was enlarged, yellow in color, and streaked with white spots. Near the diaphragm there was an abscess of the liver, containing quite a large amount of pus, and occupying nearly the entire extent of the right lobe. The liver and the spleen were attached to the diaphragm. The right pleural cavity was about two-thirds full of sero-fibrinous pus. There were some adhesions between the lung and the pleura. The kidneys were normal. The intestines could not easily be examined under the circumstances. Dr. Swift had found the record of but one like case. He said Dr. Delafield had seen no such case in so young a subject.

A specimen of

NECROSIS OF THE LOWER JAW

was presented by Dr. A. C. POST. It was removed from a patient about ten days ago, and was somewhat interesting with regard to the etiology of the affection. About two years ago the patient had a bicuspid tooth extracted from the lower jaw, but, as it broke, a considerable portion of the tooth was left behind. He had no trouble with it until eighteen or twenty months afterwards, when he began to suffer from inflammation about the jaw, and not long afterwards an abscess opened and these specimens of bone came away. The parts healed well after the remaining fragment of tooth had been removed.

Dr. Post also presented a specimen of

OMENTUM FROM A STRANGULATED FEMORAL HERNIA,

which was removed a fortnight ago from a woman about 60 years of age. She had had a tumor in the groin a good while, but it had given her no trouble until over two weeks ago. At that time the tumor increased in size, became painful and tender on pressure; she vomited, the matter afterwards becoming stercoraceous. No food could be taken. The vomiting continued after she entered the Presbyterian Hospital, three days later. Dr. Post found the trouble to be a strangulated hernia, and advised immediate operation, but consent could not be obtained until the next morning. He was not positive whether it were an inguinal or a femoral hernia, most of the mass being above Poupart's ligament; but on cutting down upon it, it proved to be the latter. A small knuckle of intestine was found, shielded by omentum from great pressure by the hard edge of the femoral ring. The intestine was reduced, a part of the omentum was cut away, the edges of the wound were brought carefully together, a carbolized solution was used, and the patient was now doing well, scarcely an unfavorable symptom having arisen since the operation. The temperature was slightly elevated for two days, and on the third day it rose to 103°, at which time there was supposed to be some intestinal irritation, but since then it had been about normal, and the wound had healed mainly by first intention. The movements from the bowels were natural. Dr. Post considered it safest always to cut away a portion of the omentum if it were found adherent or much thickened.

Dr. C. HEITZMANN presented a specimen illustrative of

THE HEALING PROCESS OF FRACTURED BONES.

Ten years ago he had made a number of experiments on animals, in order to study the healing process of fractured bones. Since then he had examined the broken humeri of two children, one two weeks and the other four weeks after the injury. There was full coincidence with the specimens obtained from the animals. There was deviation of the broken ends of bone, but no external injury. He had not yet studied how the healing goes on when the periosteum is unbroken. Immediately after the injury hemorrhage is present, and blood fills the cavity between the broken ends. Beginning with the second day, inflammation sets in, most intense in those tissues which are most abundantly supplied with blood-vessels, namely, the periosteum and the muscles. The injured bone shares in the inflammation, as a rule, only in a limited degree. The inflammation results in the formation of a medullary tissue, which towards the end of the second week after the fracture leads to the formation of cartilaginous tissue, establishing the provisional callus of Dupuytren. The cartilage is partly hyaline, partly striated, and holds plastids with coarse granules, or compact and shining, due to an active increase in the living matter. The cartilage-tissue breaks down in the third week, in a number of foci, into medullary tissue again, which, owing to an active new formation of blood-corpuscles and blood-vessels, is freely vascularized. From this secondary medullary tissue at length arises bone tissue, representing the definitive callus of Dupuytren. The newly-formed bone tissue is at first of the cancellous variety, therefore imperfect, while later, by repeated new formations of medullary tissue, the cancellous structure is replaced by regular compact bone. The healing, after months or years, is so per-

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fect, that were it not for the deviation of the fractured ends no trace of the former injury would be visible. He would emphasize the fact that the healing process of fractured bones is identical in every respect with the normal process of formation of bone.

REPORT OF THE MICROSCOPICAL COMMITTEE.

Dr. A. R. ROBINSON reported on a specimen of nasal polypus. It was an ordinary myxomatous tumor.

Dr. WYETH presented a specimen of

ANEURISM OF THE RIGHT SUBCLAVIAN ARTERY.

In June last he presented a specimen removed from a patient who had an immense abscess on the back, due to necrosis of the last cervical and first two dorsal vertebræ. He knew not at the time what was the cause of the necrosis. Returning to the hospital yesterday, he found that the patient had died the day before from rupture of a small aneurism of the right subclavian artery, which had developed deep down under the first and second ribs. Doubtless the necrosis of the spinous processes of the vertebræ was secondary to necrosis of these ribs. The patient had been examined carefully by Dr. Wyeth, by the house staff of the hospital, and by others of the visiting physicians, and there had not been the least suspicion or sign of an aneurism. There was solidification of the upper part of both lungs, as had been previously diagnosticated.

Dr. POST said he had had several cases of aneurism under his care in which no pulsation could be distinguished at certain periods, during which the existence of aneurism was doubted. The first case occurred many years ago in the New York Hospital. The patient had a large swelling in one inguinal region, and when he came under his care he could distinguish pulsation. The tumor was flatter and less prominent than aneurismal tumors usually are, but pulsation was quite distinct. The case remained under observation for some time, and finally pulsation ceased altogether. It was then submitted to a consultation of the surgeons of the hospital, and examined by leading auscultators of the city, and none could detect pulsation, and doubt was expressed as to the existence of aneurism. The patient suffered great pain, and the question was whether there was aneurism or deep-seated abscess. After consultation, he made an exploratory incision, cutting carefully layer after layer, until he came to coagulated blood, when he ceased. Within twenty-four hours there was a gush of arterial blood, and he cut down and tied the iliac artery. The patient died, however, of peritonitis. Two other cases had occurred during the past summer. In one the patient was a man about sixty years of age, who had a tumor in the axilla, which he had noticed a number of months, and which probably originated with an injury that had caused, it was supposed, fracture of the arm. There was a pulsating tumor, which could be emptied by pressure on the subclavian artery. The pulsation ceased after a time, and at a consultation great doubt was expressed as to the existence of aneurism. The result of the consultation was unfavorable to tying the artery at that time. A few days afterwards there was copious hemorrhage. He tied the artery just below the clavicle. There was extensive discoloration of the integument and tissues about the large tumor, and a number of days after ligating the artery the integument of the axilla sloughed. The patient will probably live, although he has lost much blood, and has had a tedious time of it. The other case was due to an injury of the forearm, received six weeks before Dr. Post saw the patient. Hemorrhage at the time of the accident was stopped by pressure made by a physician. At the time Dr. Post saw the patient the limb was very much swollen and hard, there was no pulsation, but the whole history pointed clearly to an injury of the ulnar artery, leading to a diffuse aneurism. He applied an Esmarch bandage, and cut down and exposed a cavity containing a large quantity of blood. The ulnar artery was wounded, and he tied it on either side of the wound.

EXFOLIATIVE METRITIS.

The specimen was presented by Dr. H. J. GARRIGUES, and was obtained from a patient who died at the Maternity Hospital lately. Two weeks previous she had suffered from diphtheritic ulcers of the vagina and uterus. To the former was applied equal parts of chloride of zinc and water, and to the latter an eight per cent. solution of chloride of zinc. The cavity of the uterus was washed out with carbolized water before and after the application of the chloride of zinc solution. The vaginal ulcers healed almost completely. The offensive discharge from the womb ceased, and an offensive diarrhœa was also cured. The womb, however, remained enlarged, extending nearly up to the umbilicus. The temperature would again run up from time to time, and on one of these occasions, while again washing out the uterus with the carbolized solution, which had so often before been of much benefit, the patient went into collapse, and died in a few minutes. At the autopsy the uterus was found ruptured before and behind, in the former place the rupture being three inches in length, and less at the latter. At these points the wall was as thin as a sheet of paper, but there was no sign of an ulcer, the ulcers having healed completely. Coils of the small intestine were adherent to the uterus, and at two places fine canals led into them. A still more interesting feature of the case was the presence of a body lying perfectly

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free and loose within the uterine cavity, being four inches long, two inches wide, and one inch thick. Microscopical examination showed that the body was composed of a portion of the inner wall of the uterus, which had been cast off by ulcerative process beneath. Interspersed with the muscular tissue was inflammatory material. It was in a well-preserved condition. This case should not be confounded with cases of gangrene of the uterus. As rare cases tend to repeat themselves, it was only recently that another physician met with a similar case, the part cast off in that instance being even larger than in this. Dr. Garrigues said that this foreign body in the womb had doubtless acted as a valve, preventing the exit of the injected fluid on this occasion, and was a factor in causing the rupture of the very thin uterine walls. He had found the record of but two like cases in the literature of the subject.

Dr. C. HEITZMANN remarked that the muscular fibres in this specimen were very well preserved indeed, and he asked whether there could not have been attachment of the body to the womb at some point, or how long did Dr. Garrigues suppose it had remained in the uterine cavity. Dr. Garrigues replied that it was two weeks from the time the woman suffered from the diphtheritic attack until her death. Dr. Wyeth then suggested that the disinfectant injections, which had been made quite frequently, might have kept the specimen in its well-preserved state.

Dr. R. W. AMIDON presented a specimen of

URINE CONTAINING HIPPURIC ACID.

The patient, a gentleman 73 years of age, up to about four years ago enjoyed almost perfect health. At that time he was much troubled in business and began to suffer from persistent, almost continuous frontal headache. The summer following, his appetite became almost ravenous. Gratifying the appetite relieved the headache to a considerable extent; and that was about the only thing which would relieve it. In July, 1881, his appetite became still more ravenous, and was followed by gastric catarrh, from which, however, he recovered. He noticed last fall that using his eyes made the headache much worse, and several oculists were consulted. He was told by some physicians that he was suffering from phosphoruria, but Dr. Amidon did not find any phosphates in the several specimens of the urine which he examined until after it had been kept a very long time. The urine was alkaline, as was the specimen presented; but this was very little ammoniacal, notwithstanding it had been kept for some time. Nearly all the specimens which he had examined presented another not very common feature, namely, the presence of hippuric acid. The crystals were commonly in the form of rhomboidal prisms, though the ends were in some instances chisel-shape. They were very apt to collect in rosettes. They were not soluble in weak acid, nor at all so in hydrochloric acid. He was much surprised in looking over the literature to find what various terms were applied to these crystals. It had been found that the quantity of hippuric acid is increased in the human urine by the ingestion of certain articles,—as huckleberries, mulberries, benzoic acid, etc.

Dr. HEITZMANN said the specimen and drawing presented by Dr. Amidon did not represent hippuric acid crystals, but simply phosphate of lime. Hippuric acid appears in the form of needles, and is very rare. He had seen it in but one case out of the hundreds which he had examined. Moreover, as the name indicates, urine containing hippuric acid should be acid, while the specimen presented was alkaline.

Dr. AMIDON said the specimen presented could not be very alkaline, since, after long keeping, it had scarcely any ammoniacal odor, and it contained oxalate of lime. It was true, certain authors agreed with Dr. Heitzmann's description of the hippuric acid crystal, but Dr. Amidon agreed with the very high authorities whose description corresponded with that of the specimen presented. Dr. Wyeth remarked that a similar illustration would be seen in Flint's "Physiology."

The PRESIDENT remarked that the physicians who had examined this patient's urine, and had found phosphoruria, took, as was quite commonly the case, a portion which was passed in the afternoon, and examined only a single specimen for the day,—a custom not to be recommended.

Dr. AMIDON also presented a specimen of

SPERMATIC FLUID,

obtained from an unmarried male patient, 40 years of age, who was a subject of nocturnal emissions for a number of years. During the past five or six months, however, he had none. He denied venereal excess, masturbation, or venereal disease. He had used alcohol in excess in his youth. During the past five or six years he had been having an emission, after stools particularly, and unaccompanied by an erection or sexual feeling. In this condition he came to Dr. Amidon, who told him at once that he had simple prostatorrhœa. He was surprised, however, subsequently, on examining some of the ejaculated fluid, to find that it contained spermatozoa. These were uniformly present. The patient improved under treatment by ergot, belladonna, and atropine, and at present sometimes passes over two weeks without an emission.

With regard to the second case, Dr. HEITZMANN had seen one instance in which a man had an emission just before micturition, and a number of surgeons here and abroad were unable to reach a diagnosis. On examining some of the fluid he found that it contained

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spermatozoa of a very peculiar shape. He found pus-corpuscles with long cilia, resembling the tails of spermatozoa, as if the latter had migrated into the former, and the only admissible diagnosis seemed to be inflammation of the spermatic vesicle (?). He asked whether Dr. Amidon had noticed any such peculiarity about the spermatozoa in this case. Dr. Amidon replied that he found very few perfectly normal ones; there were many curled up, many with large heads, and many small ones. Dr. Heitzmann then confirmed this statement on examining some of the fluid, and was of opinion that the case was similar to the one just mentioned.

The PRESIDENT remarked that he had examined the fluid in cases of occasional involuntary emissions in a number of instances, and had generally found spermatozoa, and had supposed it was of no pathological significance, but due to an overflow of the vesiculæ seminales. The case would probably be different, however, if the emission took place quite frequently.

Dr. WYETH remarked that in some of these cases there was enlargement of the vesiculæ seminales, as had been illustrated by specimens presented at this Society, and the emission might sometimes be due to pressure of the distended rectum upon the enlarged vesicle.

Dr. WILLIAM T. BELLFIELD, present by invitation, showed some microscopical preparations of

BACILLI,

and made some remarks on the views entertained at the present time concerning their relation to different diseases, etc. As bearing on the possibility of diagnosing tuberculosis from the presence of these minute organisms in the sputa, the sputa of twenty-two different patients were submitted to himself and another gentleman for examination, without their knowledge of the history of the patients. They found the tubercle bacilli in all the specimens, less marked in two, and made a diagnosis of tuberculosis. This diagnosis had been verified by the physician of the hospital by physical examination in twenty of the cases, but in the two last mentioned the diagnosis was simply of bronchitis. Sufficient time had not elapsed to be able to determine whether in these two cases there might not have been commencing tuberculosis without sufficient signs to be recognized by physical examination. A vote of thanks was offered Dr. Bellfield for his interesting demonstration, after which the Society adjourned.

A SUIT AGAINST A DRUGGIST will come before the court for trial this month in this city. A lady was salivated by taking compound cathartic pills, which had been substituted for the compound rhubarb pills, ordered by her physician. She claims damages for serious injury to her health.

GLEANINGS FROM EXCHANGES.

HYSTERO-EPILEPSY IN A BOY.—M. Bourneville has put on record, in the *Progrès Médical* for August 26, a second case of hystero-epilepsy in a boy. The child was 13 years of age when he came under observation. The following points in his history seem worthy of note. His parents were first-cousins. His father was subject to migraine in early life; his mother had spasmodic wry-neck in infancy; one of her sisters was idiotic (?). The patient was the eldest child. He seems to have been always an excitable child and easily frightened, subject to night terrors. His hysterical attacks commenced in the month of February, 1880, about a month before he came under observation. The first one came on whilst he was at work at school, with vertigo, and, after lasting two hours, was terminated by singing, crying, and laughter. The senses of hearing, sight, taste, and smell were decidedly less acute on the left than on the right side, and the same may be said of the common sensibility of his buccal mucous membrane and conjunctiva. His intellectual faculties seemed unimpaired, and he was said to be gentle and affectionate. There was no history of masturbation. On examination, several different areas were found, over which pressure was painful (*zones hystérogênes*). They were situated as follows: 1, "*clou hystérique*," at a small spot, two centimetres in front of the vertex; 2, "*rachialgie*," over the spinous processes of the fifth, sixth, and seventh dorsal vertebræ; 3, symmetrical spots on each side in the fifth intercostal space, midway between the nipple and the axillary line; 4, a painful spot in the seventh left intercostal space, about five centimetres from the spine; 5, a spot over the manubrium sterni; 6, symmetrical spots over the loins; 7, a spot almost over the centre of the iliac fossæ, corresponding to the "ovarian" region. That on the left side is the most marked. The attacks recurred at regular intervals, and lasted from one to two hours. They were preceded by an aura, which consisted of a sensation of a ball rising from the penis to the epigastrium, and thence to the level of the larynx. This was followed by the "*clou hystérique*," and then he lost consciousness. The attacks were characterized by a preliminary stage of rigidity of unusually short duration, succeeded by a clonic period, which was, on the other hand, of unusual length, comprising varied contortions and passional attitudes. During this period he would try, by different methods, to injure himself or those around him. The attack concluded, he sometimes had hallucinations of sight. He also presented a hemianæsthesia, at one time on the left side, at another on the right. The patient was cured (apparently in a permanent manner) by the assiduous use of cold douche-baths. The

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case may be noted as a typical one, both of "hystero-epilepsy" and of the way in which the physician's office is magnified in such disorders by our French *confrères.*—*Medical Times and Gazette.*

RECOVERY FROM TETANUS.—Mr. Shield reported the following case to the Cambridge Medical Society:

"A healthy country-lad, aged 17, was admitted on May 30. He was suffering from an extensive lacerated, contused wound on the flexor aspect of the left forearm, the result of the explosion of a gun. From June 23 to July 12 the symptoms were very severe, marked opisthotonus was observed, and the patient got rather emaciated. On July 10 (the twenty-third day of the disease) it was on the wane. Gradually the spasms grew less severe, the bowels acted naturally, and the appetite improved, while the patient was walking about the ward, with his wound nearly healed, and all tetanic symptoms were gone. Throughout the whole case the temperature was, for the most part, above normal, presenting curious diurnal variations, while on several occasions it reached the height of 104° to 105°. The pulse was quick and weak, and varied slightly with the temperature. The tonic spasmodic condition of the muscles did not relax during sleep. The muscles of the eyeball and tongue were not affected. The superficial muscles were extensively disintegrated, the radial artery was torn away, but the main nerves had escaped injury, and the ulnar artery was intact. The wound was treated by poultices and carbolized oil, and all went well until June 17, when symptoms of tetanus set in, with slight stiffness about the muscles of the jaws and of the neck. On June 19 these symptoms had become more pronounced, well-marked trismus was present, with epigastric pain. By June 23 the disease was fully developed; severe spasms, especially of the muscles of the back, were constantly present, the tongue was foul, the breath offensive, the bowels were constipated, and the pulse quick, while the temperature was high and the urine scanty and high-colored. Excessive sweating was also present, so that an eczematous condition of the cutaneous surface was produced. The onset of the disease, therefore, occupied about five days. The treatment adopted depended chiefly upon feeding and nursing. Plenty of good milk and eggs, with port wine and brandy, were frequently administered both by day and night, and fortunately swallowed and retained by the patient. Hypodermic injections of morphia were administered every evening, when the anguish was severe, and caused relief and some snatches of sleep. The bowels were relieved by enemata, and during their peristaltic action the patient seemed to have his sufferings increased, but after the evacuation the pains were alleviated. He smoked tobacco twice, and this gave him some relief from the accumulation of mucus in the fauces."—*Medical Times and Gazette.*

HYSTERECTOMY, PORRO'S OPERATION—RECOVERY.—Dr. T. Savage reports a case of a married woman, 25 years of age, whose health had been good until March 18, when she had vomiting and constipation, and an abdominal tumor was found upon examination. The uterus appeared to be quite distinct from the tumor; there was a sulcus between it and the cervix, and pressure from above did not affect the cervix. For reasons discussed in the paper, it was decided to operate, with the assistance of Dr. Dukes. The reporter says:

"On the following morning, therefore, Dr. Dukes giving ether, I made an incision nine inches long, the upper portion extending nearly two inches above the umbilicus. The tumor was found to be a large solid fibromyoma growing out of, and forming part of the right side of, the uterus. The cavity of the uterus was found to contain a fœtus, and was pushed upwards and to the left. The right ovary and Fallopian tubes were in front of the tumor, and almost black from compression between it and the abdominal wall.

"It was thought that it would be safer and easier to remove the whole mass, which was accordingly done, rather than attempt removal of the tumor alone. The stump was secured by a wire clamp, and its serous outer surface was attached by silk to the abdominal wound. Two thick silk ligatures were also tied round the stump, for security. Very little blood was lost, and much care was taken to prevent any from being left behind the bladder or on the vaginal roof, which appeared to be considerably dragged upwards by the clamped stump. A glass drainage-tube was inserted just above the stump, and perchloride of iron was applied to the end of the stump. After the operation, which lasted about an hour and a half, the finger passed into the vagina detected the cervix high up, but otherwise normal, showing that the wire had encircled the uterus at about the level of the inner os and had not included any of the vaginal roof with danger to the ureters. Only about four ounces of ether were administered. The mass removed weighed nearly nine pounds, and contained the fœtus with membranes intact. The recovery after this formidable operation was uninterrupted, and is very largely to be attributed to the care and skilful treatment of Dr. Dukes, who had the sole charge of the patient after the operation. She may now (August 25) be said to be quite well. The breasts secreted milk on the fourth day. The clamp came away on the twenty-first day.

"This is the second time that Porro's operation has been successfully performed in this country, so far as I have been able to learn.

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The first case was, very curiously, done by Mr. Knowsley Thornton at the Samaritan Hospital the day before this one (see *British Medical Journal*, July 22), and it seems to me that it ought to be more generally successful than the records from abroad show it to have been. Dr. Alexander Simpson's compiled table shows recoveries 41.6 per cent., and deaths 58.3 per cent.; and in Italy, where it has been done thirty-eight times, the deaths were twenty-four, or 63 per cent., and the recoveries fourteen, or 37 per cent. Experience and observation up to the present time incline me to think that the extraperitoneal method of treating the stump will be found to be the best, more frequently than the intraperitoneal."—*British Medical Journal.*

COMMUNICATION OF VACCINIA FROM MOTHER TO CHILD.—The following curious case occurs in the Tenth Annual Report of the Board of Health of the City of Boston for 1881–82: "A healthy woman, the mother of two children, was vaccinated February 13, with bovine virus, by her family physician, Dr. J. T. Harris, of the Roxbury District. On the fifth day after vaccination the patient complained of headache, had considerable fever, and, in fact, had the usual amount of discomfort that attends a successful revaccination. The woman was at this time nursing her infant, about six months old. The child had not been vaccinated, on account of an attack of eczema. On March 1 an eruption appeared on the head, thorax, and legs of the child, who had been feverish and irritable for two or three days previous. On some portions of the body the eruption was confluent, but on the arms and thighs it presented the characteristic appearance of cowpox. It was not an instance of accidental inoculation, for there was no possible way in which the child could have introduced the virus at so many different points. The only explanation possible is that the disease must have been contracted from the mother through the medium of her milk."

[It would seem as if another explanation might be suggested, and that is communication *directly* by contagion, as vaccinia is undoubtedly an infectious disease in the lower animals, and might exceptionally prove such in man. The tender age of the infant might also increase its susceptibility.—ED.]

A SPECIFIC FOR OPHTHALMIA.—An infusion of the curious scarlet seeds of the *Abrus precatorius* has long been used in the interior of Brazil as a popular remedy in the treatment of ophthalmic disorders. In some experiments made by Dr. De Wecker (*Comptes-Rendus*) to test the action of this remedy, he found that a weak cold infusion, made from the powdered seeds, when applied as a lotion, rapidly produced a purulent ophthalmia of intensity corresponding to the number of applications made. The factitious ophthalmia thus produced disappeared in the course of ten days or a fortnight without any therapeutic intervention or danger to the cornea, and Dr. De Wecker is of the opinion that this property possessed by the seeds of provoking a very intense ophthalmia of short duration could be utilized in ocular therapeutics in the treatment of granulations, conjunctival diphtheria, etc. The leaves of the plant are also used in the East as a remedy in croupal cough.—*Medical Press.*

POISONING OF AN INFANT BY A DROP OF LAUDANUM.—Dr. Lydston, of Chicago, reports the following case of an infant, about a week old, born at the Charity Hospital, New York: "The nurse called my attention to the fact that the stools contained blood, which began to appear in slight amount and gradually increased. As the child had had some diarrhœa, I concluded that the trouble was of a dysenteric nature, and accordingly gave it a drop of tr. opii with two drops of castor oil, with the result of producing the symptoms of opium-poisoning to a marked degree, the surface being cold, the pulse feeble, and respiration very slow and shallow. The pupils were contracted and the child comatose, being aroused with difficulty. By slapping the surface smartly, and the free use of the cold douche, I succeeded, after a hard night's work, in restoring the infant. The experience gained was very valuable, as it served to impress me very forcibly with a point with which I was already familiar,—viz., the marked intolerance of children for opium. The most singular feature of the case is that upon careful examination—the diarrhœa having stopped and the hemorrhage still persisting—I found the source of the bleeding to be the vagina. There was no lesion visible, but the vaginal mucous membrane was considerably congested. The hemorrhage persisted for four days, and then ceased as gradually as it began. The child seemed otherwise perfectly healthy. The blood had one peculiar quality, in that it showed no disposition to clot, resembling in that respect normal menstrual blood. There were no evidences of precocious development. I attempted to detain the child for a time, but it was removed from the hospital, and I could learn nothing of its subsequent history."—*New York Medical Record.*

DR. HENRY MACCORMAC, of Belfast, has recently published a pamphlet on the Etiology of Tubercle. Dr. MacCormac, believing, as he does, that the cause of phthisis is due to the inhalation of rebreathed air, and that perfect ventilation is the antidote, is antagonistic to Koch's theory as to the cause of the disease,—viz., that tuberculosis is a parasitic disease, the parasite being a bacillus about as long as a blood-corpuscle, and that the affection is communicable by infection, or conveyed into the system by dust. The author does not contend that bacilli are not found in tuberculous subjects, but his chief argument

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appears to be that before there can be tuberculous bacilli the man or brute must be tuberculous.—*London Lancet.*

MISCELLANY.

BLUE MILK.*—The blue appearance which milk sometimes presents after standing a few days is due to an organism which is allied to bacteria, and can be transplanted into other samples of milk and various solutions. It thrives according to the proportion of acid present and the condition of the casein; it appears after a certain degree of acidification has taken place, and prevents the further formation of acid. The casein must also be unchanged; it is then held in solution during the bluing process. The bluing occurs only in presence of oxygen, and is attended with evolution of carbonic acid.—*Druggists' Circular.*

DR. PIDOUX died on the 4th ult., at his residence in Paris, from diabetic gangrene. He was more than an octogenarian, took his degree in 1835, and has been a member of the Academy of Medicine since 1864. Dr. Pidoux has written a great deal, but his principal work is his "Traité de Thérapeutique et de Matière Médicale," the first edition of which was published in 1839, in conjunction with the late Dr. Trousseau. He was for a long time principal physician at the Eaux-Bonnes, and was a great authority on matters connected with the therapeutic action of sulphurous waters. He was also Officer of the Legion of Honor.—*Paris Letter to London Lancet.*

NEW PROFESSORS AT HARVARD.—Dr. David William Cheever has been appointed Professor of Surgery by the Board of Overseers of Harvard University, and Dr. Charles P. Lyman was appointed Professor of Veterinary Medicine, the latter being required by the veterinary school which it has been decided to open in the university this fall, in which full theoretical and practical instruction in the veterinary art will be given. The regular course for veterinary students will be three years.

MR. VACHER, in the Section on Public Medicine of the British Medical Association, said that "milk from tuberculous cows must be regarded as dangerous, but the transmission of the disease by milk was almost incapable of proof, the milk ingested by the person developing signs of phthisis being but one of many possible sources of the disease. The practical course was to boil all milk to be used as food."

* F. Neelson, in Bied. Centr.—Journal of the Chemical Society.

DR. MORELL MACKENZIE, of London, after spending several days in this city, has gone to Washington. He is expected to return on the 10th inst., when a reception and dinner will be given by some members of the Philadelphia Laryngological Society.

DEATHS FROM CHLOROFORM.—The *British Medical Journal* of September 16 reports two more cases of death during chloroform-administration, one at St. Bartholomew's, the other at the London Hospital. The coroner's jury considered it "death by misadventure."

THE General Introductory to the Course of Lectures of the Medical Department of the University of Pennsylvania was given by Prof. Leidy on October 2, at noon. That at the Jefferson College was given in the evening of the same day by Prof. Brinton. Both were well attended. A larger number of students are now in the city than at the corresponding period last year.

THE Semi-Annual Conversational Meeting of the Pathological Society was held September 28. Dr. J. Solis Cohen read a paper on "Tuberculosis of the Larynx." The Society held a social meeting after adjournment.

CLINICAL lectures have begun at the Pennsylvania and Philadelphia Hospitals. As usual, no fees are required for attendance.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY FROM SEPTEMBER 16 TO SEPTEMBER 30, 1882.

MIDDLETON, P., ASSISTANT-SURGEON.—Granted leave of absence for one month on surgeon's certificate of disability, with permission to go beyond limits of the Department. S. O. 103, Department of Texas, September 20, 1882.

POWELL, J. L., ASSISTANT-SURGEON.—To report at headquarters, Department of Texas, to temporarily relieve Assistant-Surgeon P. Middleton as post-surgeon and attending surgeon at Department headquarters. S. O. 103, Department of Texas, September 20, 1882.

CARTER, W. F., ASSISTANT-SURGEON.—Relieved from duty at Fort Concho, Texas, to report to Commanding Officer, Fort Stockton, Texas, for temporary duty as post-surgeon. S. O. 103, Department of Texas, September 20, 1882.

SMITH, ANDREW K., MAJOR AND SURGEON.—Leave of absence on surgeon's certificate of disability granted in special orders No. 131, August 22, 1882, Department of Arizona, extended two months on surgeon's certificate of disability. S. O. 214, A. G. O., September 4, 1882.

BUSHNELL, G. E., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Granted leave of absence for one month. S. O. 147, Department of Dakota, September 7, 1882.

SPENCER, WM. G., CAPTAIN AND ASSISTANT-SURGEON.—Granted leave of absence for four months on surgeon's certificate of disability. S. O. 219, A. G. O., September 20, 1882.

HOPKINS, W. E., ASSISTANT-SURGEON.—Relieved from further duty at Camp Washington, Gaithersburg, Md., and will proceed to Fort Adams, R.I., and resume his duties at that post. S. O. 168, Department of the East, September 22, 1882.

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PHILADELPHIA, OCTOBER 21, 1882.

ORIGINAL COMMUNICATIONS.

INTRAVENOUS INJECTIONS OF AQUA AMMONIÆ FORTIOR IN A CASE OF SEWAGE-POISONING.

Read before the Philadelphia County Medical Society, September 20, 1882,

BY J. T. ESKRIDGE, M.D.,

Physician to the Howard and St. Mary's Hospitals.

TO Dr. Moylan, resident physician in St. Mary's Hospital, I am indebted for many facts in the history of the following case:

George B., æt. 36 years, by occupation a sewer-cleaner, of rather intemperate habits, but healthy, and with a powerful muscular development, was admitted into the St. Mary's Hospital about 12 M. of July 12, 1882. Those who accompanied him gave the subjoined history:

During the morning he descended fifteen feet into a privy-well for the purpose of cleaning it. Almost immediately after he reached the bottom of the well, he was overcome by the gas, and fell, his body being almost entirely covered by fecal matter, his mouth pointing upwards, but still so close to the foul matter by which he was surrounded that some of the more liquid contents of the well could easily gain access to his air-passages during labored efforts at inspiration. He remained in this situation half an hour, when a rope was passed around his body, and he was hoisted from the well in an apparently lifeless condition.

During the next three hours mustard plasters were applied to his feet, and his body was rubbed with whisky, a large quantity being used externally; but none was administered internally. A physician was summoned, but he declined to undertake to do anything for the man's relief, and advised his removal to a hospital. When he arrived at St. Mary's, his condition was noted to be as follows:

His clothing had all been taken off, and his body wrapped in a blanket. The greater portion of the cutaneous surface was besmeared with the contents of the well. His breath had the odor of decomposing fecal matter. His temperature was not taken, but it was thought to be normal; pulse 160, and exceedingly weak; respiration 50 per minute, labored, spasmodic, and decidedly stertorous. The lips, face, and neck were congested and of a dark livid appearance; the pupils were widely dilated, and the conjunctivæ injected. He was being repeatedly and violently convulsed. The sudden contractions of his limbs threw his body in every direction, making it difficult for the five men who held him to prevent him from injuring himself. Ten drops of tincture of digitalis, given hypodermically, decreased the frequency of the pulse a short time, but within a few minutes its frequency was greater than before resorting to this method of medication. After this, hypodermic injections, consisting of digitalis and brandy, failed to affect the pulse. It was then fluctuating between 162 and 200 per minute. One-sixtieth of a grain of sulphate of atropia and one-quarter of a grain of sulphate of morphia injected into the left arm quieted the muscular movements a little on the corresponding, and markedly on the opposite, side of the body. The convulsive movements soon became mostly unilateral, the left arm and leg being thrown wildly in all directions. One-eighth of a grain of apomorphia was administered hypodermically, but no emesis followed. He had been under treatment in the open air in the rear of the hospital about one hour when I first saw him. His condition was rapidly getting worse. The eyes moved from side to side in a jerking, spasmodic manner, the pupils, insensible to light, contracted and dilated, often several times in one minute; the pulse was 168; respirations 48; temperature 100.6°. The extremities were cool, although warm applications were applied to them. I desired Dr. Moylan to continue with the hypodermics of brandy, which he had given several times before I chanced to see the patient. I waited about twenty minutes to observe the influence of repeated brandy injections. At the end of this time his pulse was 200, of irregular volume, and scarcely perceptible to the finger. The heart-sounds were muffled, and tracheal râles were present. His respiratory efforts, 60 per minute, were of a puffing and jerking character, the lips and buccal portions of the face being prominent from the force of the air during expiration, and collapsing during inspiration. The lips, face, and neck were of a dark-purple color, and a venous stasis, which usually precedes death, was taking place on the cheeks. A bloody, frothy mucus was escaping from the mouth. The catheter had been passed, and the bladder was found to be empty. It seemed to me that everything that promised any relief had been tried, yet it appeared that death was inevitable.

It occurred to me, in view of the state of the capillary circulation, that the cardiac frequency might be due to clotting of the blood in the heart, and that if anything could be gotten into the circulation to change the condition of the blood and rouse the man's vital powers for a short time, he, being naturally strong, might be able to throw off the noxious influences of the poison. Intravenous injection of ammonia seemed to be indicated. I exposed one of the superficial veins at the bend of the arm, raised it with the forceps, and gradually injected into it thirty-five minims of the undiluted stronger water of am-

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monia. The pulse was almost immediately lessened in frequency and increased in volume, but the stimulating effects soon began rapidly to pass away. Ten minutes after the first injection, thirty-five minims more were injected into the vein, and this was repeated every ten minutes, until one hundred and forty minims of the ammonia solution had been introduced into the blood. The character of the pulse was improved by each injection, the respiratory efforts becoming deeper and less frequent. The convulsive movements had by that time nearly ceased. The case still seemed hopeless, but, as I had to leave the hospital, I requested Dr. Moylan to repeat the injections of ammonia every fifteen minutes, until, if the man did not revive, all appearances of life were extinct. I was so sure he would die that I requested the doctor to inform me when the coroner would make the post-mortem examination. Dr. Moylan informed me next day that after he had given him the sixth injection (making the tenth with what I had employed) the pulse-beat was 128 per minute, and that it did not increase in frequency again; that the breathing became slower and more natural, the man being then in a semi-conscious condition and able to swallow some milk and brandy. After giving him two more injections of the ammonia (making twelve in all) he revived sufficiently to enable the doctor to keep his strength supported by stimulants and food administered by the mouth. At 7.30 P.M. (ten hours after entering the privy-well) he was apparently conscious. The next day he was walking about the wards of the hospital, feeling quite well. On the second day after his admission he left the institution, and came back only once to have his arm dressed.

September 16, 1882, a little more than two months after the accident, I saw the man, and obtained a few additional facts in his previous and subsequent history. He had been engaged in cleaning privy-wells, sewers, etc., about five years, and had never been unpleasantly affected with the gas before. July 12, 1882, he went down into a deep well that had been cleaned one year previously by men who experienced no unpleasant results. Before going into the well a light was lowered, but it was not extinguished. Immediately after being placed in the well he ordered a bucket. This was the last he knew, until he awoke next morning in one of the wards of the St. Mary's Hospital. He experienced no headache, neither before becoming unconscious nor after his recovery. He did not remember anything of his conversation with Dr. Moylan during the evening of the previous day, although he had conversed with the doctor and was thought by him to be entirely conscious. The appreciable effects of the gas, some of which had scarcely disappeared two months afterwards, were slight nausea, lasting a few weeks, alternate looseness and costiveness of the bowels, lasting a short time only, great drowsiness, and indisposition to exercise, attended by loss of appetite. He said that until quite recently he had felt bilious most of the time since he was poisoned, and at first had lost considerable flesh, but that of late, his appetite having returned with increased vigor, this had all been regained. No phlebitis resulted from the injury to the vein, and the wound made in the arm was in a good condition and attended by but little irritation while he remained in the hospital and kept the limb quiet on a splint. When he went home, his arm gave him so little inconvenience that he would wear nothing but a small bandage around the joint. He was instructed to keep the arm quiet, and to return daily to the hospital to have the wound dressed. He came back only once. A few days after this, the cutaneous portion of the incision healed, when pain, followed by swelling of the forearm and hand, began, resulting in an abscess at the seat of injury at the elbow, of considerable size. Two small boils subsequently formed on the forearm. It was five weeks before the arm felt strong enough for him to resume his occupation. Tingling sensations of short duration have been experienced in the ends of the fingers of the affected arm, but these, of late, have been very slight and infrequent.

Remarks.—What was the nature of the poisonous gas in this case? As a burning taper was not extinguished when held at the lower portion of the well, I should be inclined to exclude poisoning from the accumulation of carbonic acid gas or a gaseous mixture in the form of deodorized air, found by Thénard in the sewers of Paris.*

According to statements made in works on toxicology, three noxious gases capable of destroying life may be found in sewers and privy-wells,—viz., sulphuretted hydrogen, sulphide of ammonium, and carbonic acid gas. The symptoms of sulphide of ammonium poisoning, which vary but little from poisoning by sulphuretted hydrogen, agree very closely with those presented by the case reported in this paper. These, as stated in Taylor's "Medical Jurisprudence" (p. 470), are, "If a person is but slightly affected, he will probably complain of nausea and sickness; his skin will be cold, his respiration free but irregular; the pulse is commonly frequent, and the voluntary muscles, especially those of the chest, are affected by spasmodic twitchings. If more strongly affected, he loses all power of sense and motion; the skin becomes cold, the lips and face assume a violet hue, the mouth

* Taylor's Medical Jurisprudence, p. 472.

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is covered by a bloody and frothy mucus, the pulse is small, frequent, and irregular, the respiration hurried, laborious, and convulsive; and the limbs and trunk are in a state of general relaxation. If still more severely affected, death may take place immediately; or should the person survive a few hours, in addition to the above symptoms there will be short but violent spasmodic twitchings of the muscles, sometimes even accompanied by tetanic spasms. If the person is sensible, he will commonly suffer the most severe pain, and the pulse may become so quick and irregular that it cannot be counted. When the symptoms are of such a formidable nature, it is rare that a recovery takes place."

The man who ventured into the well to rescue the person, the history of whose case I have given in this paper, came very near losing his own life. A rope was tied around his body, and he was lowered into the well; but he had only just time enough to throw another rope around his insensible companion, when he became unconscious. He was immediately drawn out of the well, and soon revived when exposed to fresh air.

Taylor* mentions "an accident which occurred in Whitechapel, in August, 1857. Three men died speedily from breathing the vapor of an old sewer, and two others nearly lost their lives in attempting to assist them."

I hope some member of the Society will be able to tell me whether the gases found in sewer-wells (those through which water flows) and those found in privy-wells (those wells that are not underdrained, and into which no water is allowed to run) differ in quantity or quality, or both.

A burning taper not a sufficient test of safety of places where mephitic gases are liable to accumulate.—It ought to be generally known to men accustomed to work in sewers that, if a lighted taper is not extinguished when lowered in a well, it indicates that the oxygen of the air of the sewer or well has not been greatly diluted by nitrogen or carbonic acid gas, and that while a taper may burn brilliantly, the most poisonous gases (sulphuretted hydrogen and sulphide of ammonium) may exist in sufficient quantities to destroy life immediately. Every one who employs men to clean wells should be compelled by law, before sending his workmen into privies or partially closed sewers, to apply the sulphide of ammonium, sulphuretted hydrogen, and carbonic acid gas tests.

Treatment.—But little has been done heretofore in the way of treatment for sewer-gas poisoning except to allow abundance of fresh air, induce full inspirations by cold water to the head and spine, and to administer, when the patient is able to swallow, warm brandy-and-water. When swallowing is impracticable, hot enemata at a temperature of 110° to 115° might be given, and, if necessary, hypodermic injections of brandy should be employed. In sulphuretted hydrogen poisoning, Woodman and Tidy recommend the respiration of a trace of chlorine. "This," they say, "can be effected by making the person breathe from out of a bottle containing a small quantity of chloride of lime."† Oxygen and artificial respiration ought to be useful, especially in cases of carbonic acid gas poisoning.

In the case I have presented to-night, everything known likely to be of any benefit to the patient was done, but his death was momentarily expected. As a last resort, and because the man was believed to be dying, I resorted to intravenous injections of ammonia, more to observe its effects on the pulse in such a condition than with a hope of saving life. I was not aware at the time that I was using the stronger water, but afterwards I learned that the hospital kept only this preparation of the aqueous solution, and on testing it I find it to have a specific gravity of .900. I exhibit to-night a specimen of the ammonia taken from the same bottle from which the syringe was filled. The first and second syringefuls, containing thirty-five minims each, were injected gradually and cautiously while the effects of the ammonia on the pulse were being observed. Each subsequent injection had a more permanent effect on the heart, but during the first two hours of this method of medication the pulse would again begin to lose in strength and increase in frequency after the lapse of a few minutes. It was not until after the tenth syringeful had been employed that the pulse ceased to show signs of returning failure of the heart. The ammonia injections lessened the frequency and increased the strength of the pulse, diminished the number of respirations per min-

* Medical Jurisprudence.

† Forensic Medicine and Toxicology, by Woodman and Tidy, p. 493.

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ute, and relieved convulsive movements. When we remember the results of the experiments of injecting water of ammonia into the veins of some of the lower animals, the quantity (nearly an ounce) injected into the veins of the man who is before you to-night seems almost incredible, and ought to have produced death. The ammonia injections were not used rashly. Little by little the syringe was emptied, while the action of the heart was being watched. Indications were present, and, after being removed, repeatedly returned, for a continuance of the bold procedure. As soon as it was thought that life could be maintained by other and safer means, no further risks were taken.

Phillips says,* "Ten drops of the liquor [meaning the stronger water of ammonia] diluted with one or two ounces of warm water and injected into a vein, excite the heart so powerfully as to rouse a patient from a state of collapse. Larger quantities —thirty drops given in the same manner, after a momentary arrest, stimulate intensely, and may induce convulsions; still larger quantities cause momentary fall of arterial pressure, then sudden and enormous rise, with corresponding increase of pulse-rate." The same author states that "forty grains of carbonate of ammonia dissolved and given in the same way weaken the cardiac contractions and render them irregular, while sixty grains cause a sudden arrest of the circulation, the heart-muscle being paralyzed."

Dr. H. C. Wood states, without giving the quantity, that "when ammonia is injected into the veins of animals in considerable quantities, it causes violent convulsions, with remarkable disturbance of the respiration, followed, if the dose has been large enough, by death in a very short time."†

It is well known that ammonia added to blood outside of the body prevents or greatly retards coagulation.

The questions might with propriety be asked, How did the ammonia act in this case? and what indications arising in other cases would justify its intravenous injection? I think its action in this case of sewage-gas poisoning was twofold: first, it lessened or prevented the tendency to the formation of a pulpy heart-clot; secondly, it stimulated the cardiac and respiratory centres in the upper portion of the spinal cord or medulla. Ammonia has the power to greatly retard decomposition, and it may have acted in this manner also, as a general dissolution of the blood and tissues is stated to take place during life in fatal poisoning by sewer-gas.

In any case with symptoms of impending suffocation, or with a struggling heart unable to empty itself, in which a few hours' prolongation of life would be of great avail in the treatment, I should not hesitate to inject sufficient water of ammonia into a vein, to properly excite the respiratory and cardiac centres.

The physiological effects of ammonia when introduced into a vein are to increase the frequency and force of the heart's action, hurry respiration, and, when employed in large quantities, to produce convulsive movements. In the case of the man before you it arrested the convulsions and lessened the frequency of the pulse and respiration. Its action in this case is not difficult to reconcile with its physiological effects. The convulsive movements were undoubtedly due to the deoxidized and poisoned condition of the blood. The ammonia stimulated the respiratory efforts, the blood became reoxygenated, and the lungs were enabled to throw off poisonous elements from this fluid. Convulsions were not produced by the large quantity of ammonia injected into the blood, because the nervous system does not so readily respond to irritants when deprived of its healthy irritability. The tonic or strengthening influence of the drug on the heart and lungs is sufficient to explain its apparent paradoxical effects on this man's cardiac and respiratory centres.

The curious phenomena were the rapid alternate contraction and dilatation of the pupils, and the unilateral convulsions confined to the side of the body in which the atropia and morphia had been injected. It is probable that the play of the pupils was due to the antagonizing influences of atropia and morphia over each other.

I have no plausible explanation to offer in the elucidation of the peculiarly induced unilateral convulsions.

In regard to the quantity of ammonia to be introduced into the blood, I think no definite rules can be laid down. The full effects of the drug, when employed in this manner, are produced almost immediately,

* Materia Medica and Therapeutics, vol. i., 1882.
† Therapeutics, Materia Medica, and Toxicology, by H. C. Wood, M.D.

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and should be ascertained by observing the pulse while the syringe is being gradually and slowly emptied. I should be guided in this method of stimulation very much as I would be influenced in giving alcohol in cases of typhoid fever attended by marked depression of the vital forces. If five or ten drops were sufficient to arouse my patient, I should give no more; or if nearly an ounce were necessary, as was found in the instance I have related, I should not hesitate to employ this quantity. Effect, not dose, would be my object. In all cases the syringe should be emptied slowly, allowing sufficient time to elapse to enable one to see the effects of a small quantity before a larger one is given.

It should be borne in mind that the intravenous injection of the carbonate is probably attended with greater danger to life than when the water of ammonia is employed.

When I again resort to the intravenous method of using ammonia, I shall dilute the stronger water with two parts of distilled water heated to about 110° F. If water freed from its impurities cannot be obtained, I shall use the ammonia-water in its purity or dilute it with pure alcohol.

NOTES ON TINEA DECALVANS.

Read before the Philadelphia County Medical Society, September 20, 1882,

BY J. CUMMISKEY, M.D.

TINEA DECALVANS is a disease affecting chiefly the hairy scalp, and is known by various names. Willan describes it as porrigo decalvans; Bazin, as teigne pelade decalvans; Mahon, as tinea tondens; and Gruby, as phyto-alopecia. It has also been described under the name of alopecia areata. Though enjoying a diversity of titles, it is by no means difficult of recognition. Tilbury Fox, in his admirably clear style, has described it as "characterized by the presence of circular, perfectly smooth, pale, bald patches varying in size from one-third of an inch to one or two inches or more in diameter. Patients say that they discovered a small bald spot, which has got steadily larger and larger. There may be several spots. There may be slight scurfiness. The patches are well defined. . . . . The hairs around the bald patch are more or less dry, come out readily, and are seen to be bulbless and tapering at their roots towards a point. Under the microscope, in some instances, at intervals on the shaft, are collections of minute spores, and also in the little masses of epithelium that stick to the hair. The hair may present bulgings here and there, which are due to the presence of abnormal granular matter, partly pigmentary, partly the minute stromal form of the fungus, which is also scattered throughout the hair."

The discovery of a bald spot upon the scalp, unattended by an eruption, is generally a surprise to the patient, and the disease is frequently allowed to become well established before recourse is had to treatment. Some itchiness of the scalp is noticed previous to the falling of the hair, but this is not a sufficient warning to awaken the attention of the patient to the existence of the disease and enable him to take advantage of medical treatment early enough to prevent the alopecia which is sure to ensue.

Tilbury Fox, in his description above given, shows his undoubted adherence to the parasitic origin of the disease. The presence of a vegetable parasite has, however, been denied by some dermatologists, but the origin of the disease, it is generally conceded, is due to the presence of the microsporon audouini, which was discovered by Gruby in 1843. Robin denied its existence, but Bazin, in 1853, confirmed Gruby's discovery.

The parasite, it is said, appears first upon the shaft of the hair, and grows downwards into the hair-follicle. There once, it grows, safe from any interference, until, by the destruction of the hair and its removal, the parasiticides have the chance of reaching and destroying it.

McCall Anderson considers the disease a comparatively rare one, having in private practice seen but forty-four cases in one thousand, and but one hundred and fifty-three in ten thousand cases in hospital practice.

The identity of the several parasitic diseases has been ably discussed by W. Tilbury Fox, and it is probable that, as the subject becomes more closely studied, his views will be found correct. The treatment being, however, much the same in all, the practitioner will not suffer while the subject is undergoing the process of scientific elaboration.

The disease, coming for treatment, as it generally does, already well established, is

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chronic in duration and difficult of cure. For, after destroying the parasite, the alopecia or baldness remains, and the latter is, in many instances, no easy matter to remedy.

In giving an opinion as to the time the baldness will last, it would be well to allow abundance of time, particularly if the case be an adult, for it may be that many months of tedious waiting and persevering treatment may elapse before you are rewarded by signs of a new and natural growth of hair.

The usual plan of treatment recommended is to apply parasiticides to those portions of the scalp in which the disease is noticed, to stimulate the bald patches by means of cantharides, and to give internally arsenic in some form. This plan may succeed in some cases, but it may also fail, and much time may thereby be lost. The disease can be eradicated most speedily by a recourse at once to epilation, or the extraction of all the diseased hairs. Commencing at the borders of the patches, the hairs should be gradually removed as far as any evidence of disease can be detected. The parts to be epilated should be prepared by the application, as recommended by Bazin, of the *huile de cade*, which renders their extraction more easy. After epilating a portion, the oil of cade may be rubbed in, and a solution of bichloride of mercury in alcohol may be directed to be applied two or three times a day. (Bichloride of mercury gr. iv, alcohol ℥j, is the usual strength.)

The bald patches must be blistered from time to time, and the whole scalp shaved at times to enable you to watch for fresh evidences. If stubs be noticed here and there throughout the hitherto sound portions, then it were better to epilate the whole of the scalp. Attention must be given to the general treatment, tonics and arsenic being generally found needed and serviceable.

In epilating, care should be taken not to grasp too many hairs at one time, as unnecessary pain is thereby inflicted, and, besides, many more of the hairs are broken off than otherwise would be, and the operation is made more tedious.

THE HEALTHIEST CITY IN EUROPE.—At the recent meeting of the Hygienic Congress at Geneva, it was stated that the bills of mortality gave Geneva a death-rate of only 17 per 1000.

A CASE OF RENAL CALCULI.

Read before the Philadelphia County Medical Society, September 20, 1882,

BY J. B. WALKER, M.D.

MR. PRESIDENT AND GENTLEMEN,—I beg leave to present the following case, which may not be without interest:

Mrs. Rosa F., aged 30 years, German, married for twelve years, has had four children, all of whom are living. Prior to her present illness she was always possessed of unusually good health. Twelve months ago, while pregnant the last time, and about the period of quickening, she first felt a pain, paroxysmal in character, and extending along the line of the right ureter. Prior to this, for about two years, she passed from time to time "bloody urine," in which could be seen sandy particles. Since the paroxysmal pains first presented themselves, they have frequently recurred, sometimes on one side, sometimes the other, radiating from the position of the kidney to the bladder, and usually followed with hæmaturia, and sometimes the escape with the urine of concrétions, pin-head or larger in size. Of late, besides the paroxysmal pains, constant pains in the loins and along the ureters and over the vesical region have persisted, gradually increasing, accompanied by some suprapubic tenderness. She has submitted to various plans of treatment, without experiencing relief. She presented herself at the Dispensary Service of the Woman's Hospital in December, 1881, and was consigned to my clinic. Her face was pale and careworn, body well nourished, appetite moderate, bowels normal. Complains of pain along the course of the right ureter, and tenderness over the bladder. Sometimes the pain is worse along the left ureter. Has a "burning sensation" in the vesical region. A specimen of the urine, which was passed just before the clinic, was dense, bloody, and loaded with a white sediment, a portion of which, somewhat firm, represented a pin-head calculus. This urine, voided within a half-hour, was alkaline, without a particle of ammoniacal odor. The sediment entirely disappeared on adding an acid.

Her condition is evidently due to the escape, from time to time, of renal concretions of small dimensions, formed in the pelvis or calices of the kidneys, and carried with more or less pain along the ureters to the bladder, where a small amount of vesical catarrh is produced, sufficient to induce the burning pain and soreness of which she complains, but not enough to cause the formation of secondary ammoniacal phosphates.

Renal calculi are usually due to the deposition of uric acid, next most frequently of oxalates. The present case was evidently due to neither of these deposits, as the

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urine, always acid in such cases, was alkaline when voided, and the deposits at once disappeared on acidulation. It was therefore diagnosed as a case of "primary phosphatic" deposit or "gravel," which, though a rare form of renal calculus, does sometimes occur. Secondary phosphatic calculus, or vesical phosphatic calculus, due to catarrh and the associated ammoniacal decomposition of the urine, is of daily occurrence, being a constant accompaniment of chronic inflammation of any portion of the route of the urine to the bladder and inclusive thereof. In these cases the urine is also alkaline when voided, but is at the same time ammoniacal. With these points before us, the question of treatment was entered upon. It was decided to administer such substance as should render the urine acid, and keep it so. The vegetable acids, being worked up in the economy into alkaline carbonates, were not admissible for our purpose. The mineral acids, being equally inefficient for our purpose, were excluded. Benzoic acid, having been proven to be excreted as hippuric acid, or, when given in excess, partly as benzoic acid also, was chosen.

The patient was ordered fifteen-grain powders of benzoic acid, with instructions to take one four times in the day. She returned three weeks later to report improvement. The urine was much clearer, being neither bloody nor smoky. It was acid in reaction. The paroxysms of pain had almost ceased, and, though the vesical pain was still present, it was much subdued. But the remedy had become exceedingly distasteful, and she desired that it should be changed, if possible. She was directed to discontinue it, and in its stead were ordered fifteen-grain powders of boracic acid, —an agent also capable of rendering the urine acid,—with directions to take one powder four times a day. As the internal use of the agent was somewhat new, she was requested to report at once in case any unpleasant symptoms presented, and to report in two weeks at the clinic.

Two weeks after, she returned, and those who had seen her careworn and anxious face a few weeks before could scarcely have recognized the patient. She was entirely relieved of all her symptoms. Her digestion was good, with a good appetite and regular bowels. All evidences of pain had vanished from her face, and its pallor had disappeared. The urine was perfectly clear, with an acid reaction and no sediment. She was directed to continue the remedy, taking two doses daily, until further notice.

Three weeks later, February 7, she reported having stopped the remedy about a week before, on account of a diarrhœa associated with some vertigo, and, as her nursing babe was also affected with diarrhœa, she thought the remedy might have induced the symptoms; and, as she had had no return of her urinary trouble, she had discontinued it. The diarrhœa and vertigo ceased, and she is in excellent health and spirits, with a urine acid in reaction and without sediment.

I have seen the patient within a month, and she still continues well.

I am of the opinion that this was a case of primary phosphatic calculi; but in this I may be mistaken. Its rapid recovery, after the tendency to precipitate a sediment was corrected by rendering the urine acid, would seem to me to exclude the usual causes of secondary phosphatic calculi.

ACUTE YELLOW ATROPHY OF THE LIVER.

Read before the Philadelphia County Medical Society, September 20, 1882,

BY J. H. MUSSER, M.D.

MY apology for the incomplete report of this case is that the ignorance and superstition of the family absolutely forbade any attempt at scientific investigation. I am indebted to my friend Dr. McCall, of West Philadelphia, for the opportunity of studying the case with him. The doctor had attended the patient during a period of three weeks previous to my seeing her, on account of symptoms of gastro-enteric catarrh, with light jaundice. Only two days previous to my seeing the patient did she present symptoms which led the doctor to recognize the disease.

I saw Mrs. B. June 23. She was 25 years old, of the lower class, in the fifth month of pregnancy with her second child. She had had puerperal convulsions and a very hard labor with the first child. When she found she was again pregnant, her disposition changed: she brooded very much over her condition, was much alarmed at the prospects of another confinement, and resorted to means to provoke an abortion. At the visit she was sleeping heavily, and was aroused with difficulty, to answer questions with hesitation. She had been in this semi-stupid state for three days. She had severe headache, and was rather restless. Pupils equal and normal; conjunctivæ yellow; skin of a lemon-yellow hue; arms and trunk more deeply stained than legs; no eruption or ecchymoses; temperature normal; tongue coated with a light-yellow fur; no appetite; constant vomit-

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ing of mucus and dark-green bile; severe epigastric pain, and pain in the hepatic region; abdomen not distended. In the nipple-line the hepatic dulness was two inches in width, the lower limit being two inches above the margin of the ribs; in the axilla two and one-half, and posterior two inches. The spleen was not enlarged. Pulse 104.

June 24.—Stupor more marked; passes urine involuntarily; vomiting of a dark grumous material; bowels opened twice; pulse 100; temperature normal.

25th.—Semi-comatose; tongue dry; slight hemorrhage on gums and lips. Although almost in coma, yet tosses about the bed, and is wildly delirious at times. Had vomited profusely a liquid which, on standing, separated into two portions,—a clear colorless portion and a dark coffee-ground-looking portion. Bowels not opened; pulse 80, moderately full; no fever.

26th.—Semi-comatose; pupils regular, partially contracted, fixed; low delirium; involuntary fecal and urinary discharges; tongue dry and brown; sordes; anterior liver-dulness only in sixth interspace; spleen enlarged; pulse 70, full.

27th.—Coma; pulse 90, rather full; no elevation of temperature; death. She did not abort. It is almost needless to say that, prior to death, the yellow atrophy was diagnosed, and an unfavorable prognosis given.

Post-mortem, two hours after death.—Body warm; rigor mortis begun; large ecchymoses over surface. Abdominal cavity alone examined. Tissues stained with bile; blood not coagulated, of a peculiar dark mahogany-red color; no peritonitis. Liver not seen in ordinary view. Found high up and against vertebral column; intestine between it and thorax. It was about half its natural size, very soft and flabby, and with its capsule puckered up. The thickness was lessened more than any other dimension. Large areas of the external surface were of a mahogany-red color, and larger of a yellow hue. On section, the red portions looked not unlike the red-colored pulp of oranges we often see; the yellow were characteristically ochre-colored. The red portion was congested, the yellow anæmic. In the latter areas, the outlines of the lobules were effaced, although there were numerous dark-red puncta marking the hepatic vein. The gall-bladder was very small, and contained a teaspoonful of olive-green bile. The ducts were empty and patulous. Spleen slightly enlarged. Kidneys enlarged; capsules removed easily; stellate veins and capillary circlets enlarged; tissue bile-stained and congested; cortex enlarged.

Microscopical examination of the liver resulted as follows. In some areas the cells of the lobules were not much degenerated, but all contained one or more oil-globules. In most lobules, however, the cells of the periphery were markedly changed: globules of oil in abundance, shrivelled cells, free nuclei, and numerous lymphoid cells replaced the normal liver-cells. Some of the lobules were entirely destroyed. In some lobules a marked infiltration of lymphoid cells in the periphery was noted. The portal vein appeared normal. The hepatic vein showed cell-infiltration. The walls of the artery were thickened. The hepatic duct was filled with epithelial cells, and the walls thickened. No crystals of leucin or tyrosin were found, but here and there hæmatoidin. The kidneys presented the characteristic changes of chronic desquamative nephritis, with congestion.

It is further to be noted that the urine, obtained with difficulty, was of a porter color, acid, and of a specific gravity of 1.014. It contained one-eighth albumen, fatty and granular casts, fatty epithelium and free oil-globules, urate of soda crystals, and oxalates. There was not a sufficient amount to make a quantitative examination. Leucin and tyrosin were absent; indican present.

The macroscopical and microscopical appearances show that the liver was not entirely diseased,—scarcely half. The histological appearances distinctly show to my mind that the changes were due to a diffuse hepatitis.

It is probable, as in a case Murchison reports, that the disease had not sufficiently advanced to produce the characteristic changes in the urine. The state of the kidneys must be considered as a factor determining the result. The absence of hemorrhages beneath the skin is to be noted, and the occurrence only of trivial ones from the mouth and stomach.

3705 Powelton Avenue.

HERNIA AND VAGRANT TESTICLE.

BY HENRY M. WETHERILL, JR., M.D.,

Pennsylvania Hospital for the Insane.

THE following case will illustrate what serious results may follow the careless and unscientific application of trusses to hernia, by those who engage in the business of adjusting the various supporting and retaining appliances to the parts affected, without first acquiring that knowledge of anatomy which is indispensable to the proper pursuit of their vocation.

While acting as resident physician to the Pennsylvania Hospital, the following case came under my observation:

G. M. R., æt. 25 years, a widower, and without children, is the subject of congenital, indirect, incomplete, inguinal hernia of the right side. He states that the right testicle

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has frequently disappeared from the scrotum, and then returned again, and that this has been the case as far back as his memory reaches.

The hernia has never descended into the scrotum. In 1869 he underwent an operation for the radical cure of the hernia, which was unsuccessful. About four weeks prior to his admission, his attention was attracted by an advertisement which promised the radical cure of hernia by the application of a truss. He applied at the store, where they fitted him with a truss which he has worn ever since, although it caused him pain and uneasiness from the very first. Upon examination, it is found that he has hernia, the intestine being lodged in the inguinal canal, and apparently sustained by the right testicle, which is also lodged in the canal in advance of the loop of intestine. The testicle has sustained the principal pressure from the pad of the truss, and is much irritated, and can be felt through the integument as a hard painful tumor. The character of the pain is constant, throbbing, and sickening, causing faintness, nausea, and sometimes vomiting, with great weakness and copious perspiration. The patient was put to bed, ordered liquid diet, sedative and antiphlogistic washes applied locally, and morphia given by the mouth *pro re nata* for the relief of pain. This treatment having been pursued for five or six days, with little or no relief to the patient, Dr. William Hunt decided to operate. The parts having been shaved, and the patient etherized, Dr. Hunt made an incision in the line of the canal, four inches in length, and removed the testicle, which was found adherent in the canal, supporting the hernia, which was small and was slightly congested. The loop of intestine was not disturbed. The parts were very vascular and much inflamed, and several vessels were tied with silk. The canal was now occluded by passing pins deeply under it, their heads and points resting upon the integument upon either side of the incision, twisted sutures bringing the edges into apposition. Carbolized dressing was applied to the wound, and a grain of opium was given by the mouth every four hours until the patient was well under its influence. The next day peritonitis set in, the temperature rose to 104°, and for the next ten days the condition of the patient was most critical, the temperature ranging from 102° to 103.5°; but after this it abated, and the patient made a good recovery from the peritoneal inflammation. Upon the sixth day after the operation, the pins, having loosened, were withdrawn, and it was found that the wound was uniting and looked well. It was supported by adhesive straps, and the carbolized dressing was continued. By the twelfth day the ligatures were all away. From this time the patient did well, the wound healed, and it was found that he had been radically cured of the hernia, its descent having been rendered impossible by the obliteration of the canal. An examination of the removed testicle showed that it was much atrophied, blackened, and softened, and, had it not been removed, would have soon sloughed.

Those who hold the opinion that irritations of the male genital organs are sometimes capable of producing an hysterical condition in the male, would have had their opinion strengthened by an examination of this patient at the time of his admission to the hospital. His condition was distinctly hysterical, and so remained until the removal of the compressed testicle, after which he bore the pain of the peritoneal inflammation and of the wound with great patience and fortitude.

NOTES OF HOSPITAL PRACTICE.

UNIVERSITY HOSPITAL.

CLINIC OF D. HAYES AGNEW, M.D., ONE OF THE SURGEONS TO THE HOSPITAL, AND PROFESSOR OF SURGERY IN THE UNIVERSITY OF PENNSYLVANIA.

Reported by WM. H. MORRISON, M.D.

DISEASE OF THE KNEE-JOINT.

GENTLEMEN,—The first case that I shall show you this morning is this little patient, who is 5 years of age. You at once notice a change in the contour of the left leg, and you will also observe that the main characteristic features of the knee-joint have been obliterated. You do not see the sharp line of the patella, nor do you see the depression upon either side of the quadriceps muscle. When I place my hand over the knee, I find that the surface-temperature is greater than on the opposite side. When I attempt to extend the limb, I meet with great resistance, part of which is unquestionably voluntary and part involuntary. Some of this is due to spasm of the muscles, caused by the child's apprehension of being hurt. In attempting to flex the limb there is the same supersensitive condition of the joint. Placing my finger behind the joint, I find the tendons rigid, and I also find a little prominence, which is becoming suspicious on account of its softness,—not exactly fluctuation, but something akin to it. This is what we learn by looking at the limb.

Let us now go back a little. We learn that about two years ago this child first had trouble in the knee-joint,—that is, there was a certain amount of tenderness,

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swelling, and a disposition to flex the leg. When you find these symptoms in a child of about this age, you should suspect the beginning of a serious joint-trouble. The joint-trouble may originate in the articulating extremities of the bones or in the synovial membranes. In all serious joint-troubles you will find the limb beginning to assume the position you here see. It is an effort on the part of nature to accommodate the fluid thrown out. You do not see it in inflammations outside of the joint. In extra-articular troubles the limb is not flexed, and when you find this disposition to flex the limb you may know that you have some deep-seated or intra-articular trouble to deal with.

The reason of this flexing is twofold. If you take a knee-joint that has been cleared of everything except the ligaments, and flex the leg, you will find that the ligaments become relaxed; but extending the leg they are put on the stretch: so when there is flexion the inflammatory effusion inside of the joint has more room. Then there is another reason. All intra-articular trouble is accompanied by a certain irritability of the muscles. The muscles begin to contract, but, as the posterior muscles are admirably situated to flex the limb, they overpower the anterior muscles, and we have flexion.

We have different forms of this disease. Sometimes it is a simple synovitis, the result of traumatism. An individual receives a blow on the knee, catches cold, or something of this kind, and the knee becomes swollen, red, tender. The affection of the synovial membrane is acute in character, and generally, under proper treatment, soon disappears. If, on the other hand, the disease has a constitutional origin, you have reason to expect an inflammation of an insidious and deep character. I know that at the present day this doctrine is rather scouted, most inflammation of joints in children being referred to traumatism; but this, like all fashionable things, will have its day, and you will find the profession settling down to the opinion that behind the traumatism there is some constitutional state which predisposes the person to this form of inflammation.

In what consists the stiffness or anchylosis in these articular affections? Sometimes it is lymph thrown across the joint in different directions, or the inflammation may attack the cartilage, and these become ulcerated, disintegrated, and removed, thus exposing the articular ends of the bones. Then the compact tissue covering the articulating extremities may be broken down, and granulations start from the cancellated tissue. The joint becomes filled with this granulation tissue, which finally ossifies, and the ends of the bones become firmly united together (bony anchylosis). There is another form in which fungoid granulations occur. This gives a suspicious softness or a sense of fluctuation to the joint.

Again, abridged movement may be due to changes on the exterior of the joint. When the joint is flexed, there are produced doublings or corrugations in the ligaments. These doublings may be united together. In all these cases it is important to keep the limb in such a posture that if anchylosis should occur (and we sometimes desire this termination) the limb will still be useful.

I consider the present case to be one of strumous arthritis. The limb is becoming fixed in an unfavorable position, but there is now such a degree of inflammation that it would not be proper for me to attempt to straighten the leg; but, after the acute symptoms have subsided, I shall bring the limb to a better position.

The proper treatment for a joint in this condition is to put the limb at rest by means of silicate or a plaster dressing, or by means of a posterior splint moulded to its posterior surface, and wait until the acute inflammatory symptoms have disappeared. Then, if we believe that disorganization of the joint has not taken place, we shall divide the tendons and straighten the limb. I shall therefore apply a plaster bandage, and paint the joint with the tincture of iodine or with Lugol's solution (the compound solution of iodine), which in some respects is better than the tincture. Constitutional treatment is also important. Although this child is pretty well nourished, I shall give him cod-liver oil and the iodides.

COXALGIA.

Here is another little child, rather delicate-looking, who has a trouble which we have located in the hip, for the following reasons. I take hold of the left thigh, put my finger on the anterior superior spinous process of the ilium, and then

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carry the thigh in and out in this manner. You see that the pelvis remains quiet. I flex the thigh until its anterior surface touches the abdomen: still the pelvis does not move. Let us now test this on the right side. I take hold of the thigh in the same manner, and you see immediately that the pelvis moves with every motion of the limb. Here, then, is a symptom which is positive, crucial, which settles beyond question that this is disease of the hip, or, in other words, coxalgia. There is another symptom usually present in these cases,—that is, obliteration of the fold separating the thigh from the buttock, the gluteo-femoral fold. On the left side there is a distinct crease, but on the right the thigh passes into the buttock without any distinct line of demarcation. You also observe, as the child stands, that the whole limb is advanced, the foot turned out, and the knee flexed. This is the position of the limb in the first stage of coxalgia.

Coxalgia, as you know, sometimes commences in the acetabulum, sometimes in the head of the femur, and sometimes in the synovial membrane. It usually occurs in early childhood, and in the majority of cases has a constitutional origin. It has been divided into stages: the first stage is characterized by flexion of the thigh, flexion of the leg, and eversion of the foot; following this we have the second stage, in which the posture of the limb is changed, the foot being inverted, and the external portion of the hip being very prominent; in the third stage, disease of the bone, necrosis, and abscess occur.

An important matter is to make the diagnosis as soon as possible. If you will remember the few symptoms which I have given, they will enable you to determine always whether or not the disease is present. Coxalgia is often mistaken for rheumatism.

What is the treatment? The treatment is rest of the joint. A cardinal principle in the treatment of all articular disease is rest. What I mean by rest is absolute immobility of the joint. There are different methods of treating hip-joint disease. There is one plan which consists, as it is alleged, in drawing the articular surfaces of the bone apart, while at the same time the patient is allowed to walk about, the weight of the body being supported on the perineum. This does not secure fixation of the joint, but the supposition is that, the joint-surfaces being drawn asunder, the source of irritation is removed. I take it on myself to say that there are anatomical reasons which make it impossible to draw the articulating surfaces from each other in this way. I say, further, that no plan that allows the motion of the joint is adapted for the treatment of hip-joint disease. The function of a joint is motion. The more a joint is moved, the more blood flows to it; but you do not want any more blood than is necessary for the support and repair of the part. If you have more, you aggravate the inflammation.

The proper plan of treatment is fixation of the joint. The old Physick method, which consisted in the use of a splint, was a good plan; but it was objectionable in that it required the patient to keep the recumbent position. If it is possible by any means to fix the joint and at the same time allow the patient to move about, we have accomplished the great indications in the treatment of coxalgia: the patient is allowed to go out in the air, and the general health is improved. This is an important consideration in all cases of this kind.

The best apparatus for the treatment of this disease is, I think, the one which I here show you. It consists of a large piece of leather, which is fastened around the body. To the back part of this leather is secured a piece of steel. This runs over the buttock, fitting into the gluteo-femoral fold, down the thigh, and terminates halfway between the knee and the foot. Bands of leather extend around the thigh, knee, and calf, thus securing the apparatus. Having thus fixed the joint, it is necessary to raise the patient. You may do that either by a shoe like this, with an iron sole, or, which is perhaps more elegant but certainly more expensive, by a shoe with a cork sole, placed on the foot of the sound side, thus raising the patient two and a half or three inches. The patient is then placed on crutches, and allowed to go about. This splint is constructed somewhat on the plan of Thomas, a surgeon of Liverpool, England. It has, I think, been very tardily accepted by surgeons on this side of the water, but it will in time find its way into favor.

You may, perhaps, live at a distance from an instrument-maker, and you want to know how to order this apparatus. Take

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a piece of flexible metal, and apply it to the back of the limb, causing it to fit into all the inequalities. Next take a plaster roller and carry it around the body, commencing below the crest of the ilium and extending upwards to the inferior angle of the scapula. Allow the plaster to remain on for fifteen minutes, until it hardens; then slit it up the front and remove it. Send the plaster roller and the metal strip to the instrument-maker, and he can make an apparatus which you can readily apply. If there is any tendency to slip, suspenders over the shoulders will remedy the difficulty.

This apparatus should be kept on for some time. I have frequently had patients who have aborted the disease in eight months or a year. Taking the case in its incipiency, you can occasionally bring about resolution of the disease, and prevent it from going through those horrible stages which lead so often to such deformity, and often, indeed, to the death of the patient from the wasting effects of suppuration.

LUXATION OF THE LOWER JAW.

The next case is one of luxation of the jaw. This man has had the accident occur on several occasions. Both condyles, or only one, may be displaced (bilateral or unilateral luxation). When the luxation is complete, the condyles are carried over the eminentiæ articulares into the temporal fossæ. The lower jaw is then in front of the upper, but perhaps not so much as you would think. The dental arches are sometimes slightly and sometimes widely separated, the jaw is fixed and immovable, the saliva flows over the lip, and the patient is incapable of speaking.

The symptoms that I have just detailed do not correspond with the condition present in this man. He can open his mouth, which he could not do if he had a complete luxation, but he cannot shut it. If, in a complete luxation, you put your finger in front of the ear, you will find a depression where the condyle should be. As I move this man's jaw, I feel the condyle moving under my finger, a little in advance of its usual position. This is, therefore, partial luxation, in which the condyles rest on the eminentiæ articulares. Partial luxation occurs generally as the result of an unusual relaxation of the muscles of mastication, or of elongation of the ligaments.

In the reduction of this luxation, it is generally necessary to guard the thumbs by wrapping them with a towel, or something of the kind. The first thing to do is to place the thumbs on the molar teeth of each side and press the jaw directly downwards, so as to disengage the lock of the coronoid processes under the zygomatic arch. As soon as the muscles have been elongated, the chin is to be elevated, and the muscles will then draw the jaw into its place. [The doctor here reduced the luxation in the manner described.] It is always well to direct that a bandage be tied around the head, in order to fix the jaw. The jaw is very easily displaced after it has been once out.

The late Prof. Gibson used to tell a good anecdote in regard to luxation of the jaw. "An old and quite wealthy man came into the office of a surgeon, with a luxation of the jaw, and made motions to have it reduced. The jaw was reduced, and on being asked the fee the doctor mentioned an amount which the man regarded as entirely too much, and insisted on its being reduced one-half. The surgeon said no more about the fee, but began to talk, and pretty soon told a laughable story. The man began to laugh heartily, and out went the jaw. He again made signs to have it reduced, but the doctor said, 'When you pay down my fee, I will put in your jaw.'"

HYDROCELE—TREATMENT FOR RADICAL CURE.

This patient has a swelling situated on the right side,—in the right scrotum. This swelling, he says, began in the lower part of the scrotum and gradually rose towards the external abdominal ring. This swelling is pyriform in shape; it has a disposition to stand off from the body; when I press it, it gives me the impression of an accumulation of fluid; it has never disappeared since it began; it remains the same in the recumbent position; it cannot be removed by pressure, or passed up into the cavity of the abdomen; and when examined by the light test it is found to be translucent. These symptoms indicate its character: it is a hydrocele. This is sometimes confounded with hernia; but, when you consider the points that I have mentioned, you will see that this mistake

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is not likely to be made. Hernia commences above, and goes down; in the early stages, at least, it is reducible, and when the man lies down it returns into the abdominal cavity; when the patient coughs, unless the hernia is strangulated, there is more or less impulse communicated to the hand, and you will always find, what I regard as a very characteristic symptom, that a hernia falls in towards the thighs, and never stands out from between them.

This, then, is a hydrocele, or a collection of fluid in the tunica vaginalis. The radical treatment of such a case consists in tapping the sac, drawing off the fluid, and then substituting for the fluid something that will produce inflammation of the sac. Various substances have been used for this purpose. Setons are sometimes employed. These will usually cure; but there is always risk that suppuration may occur in the sac, giving rise to a great deal of trouble. Various substances are used by injection, as the old-fashioned but very painful one of port-wine, or carbolic acid, tincture of iodine, and sulphate of zinc. The remedy which I have found to act most satisfactorily is the tincture of iodine. There is something peculiar about the inflammation excited by this remedy. I have never seen it produce suppuration. The pain caused by its use soon subsides, and it develops inflammation sufficient to prevent further secretion of fluid. Hydrocele is not cured, as is sometimes supposed, by the two surfaces of the tunica vaginalis being glued together and the cavity destroyed, but by some modification of its surface. The inner surfaces lose their moist, smooth, and glistening appearance, become rougher, and are intersected at points by bands of lymph.

I propose, therefore, after introducing this grooved needle (for I always like to see the character of the fluid before I inject a hydrocele), and if I find no disease of the testicle, to inject two and a half drachms of undiluted tincture of iodine. In tapping, always make the integuments tense, for, if you do not, the trocar may slip between the tunica vaginalis and the integument. Guard the testicle by grasping the tumor, so as to keep the gland back. The trocar is to be first put in perpendicularly, taking care to avoid any large superficial vein, and then brought to an oblique position as it enters the sac.

You now see the serum escaping. This has a bloody appearance. The fluid from the tunica vaginalis is usually of a light straw color, and is highly albuminous. This is a little bloody, perhaps as a result of previous tapping. The testicle is, I think, not diseased. I judge so from the fact that it is neither super-sensitive nor enlarged. Always, before injecting a hydrocele, examine to see if there is a hernia. There is no impulse transmitted on coughing: I therefore judge that there is no hernia. Having removed all the fluid, I now inject f℥ijss of the tincture of iodine. I leave it all in, not allowing one drop to escape. In order to have the fluid brought in contact with the whole surface of the tunica vaginalis, I rub it in this manner in different directions. After injecting a hydrocele, you will often find pain complained of in the loin. This only means that an impression has been made on the genito-crural nerve, and that this has been reflected from the tunica vaginalis to the loin.

The patient will now be put to bed. In two or three days the scrotum will be larger than it was to-day, but after this time it will begin to subside. In six or seven days a suspensory will be applied, and the patient allowed to go about. The cure is generally completed in three or four weeks.

FRACTURE OF BOTH BONES OF THE LEG.

This man has just been admitted to the hospital. He has received an injury of the leg. The first thing we observe on comparing the two limbs is that the one on the left side is very much swollen, that the foot has a tendency to roll out, and that there is some discoloration about the ankle. Taking these things in connection with a slight deformity which I observe, I should say that we probably have a fracture at the lower part of the leg. When I take hold of the leg, I find that there is a fracture of both bones at the lower third. I have the two characteristic symptoms of fracture, unusual mobility and crepitus. I shall, therefore, not submit him to the pain of any further examination.

You are all familiar with the treatment. It consists in putting the leg on a pillow in a fracture-box, placing around the ankle a compress wet with some anodyne lotion in order to relieve the inflammatory swelling, and then suspending the

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fracture-box by a sling, thus preventing any derangement of the fracture by the movements of the patient. This is a valuable addition to the fracture-box in the treatment of fracture of the leg. We now adjust the fracture-box. Let me say two or three words in regard to manipulation. I run my fingers down the spine of the tibia, and I find a slight displacement, the lower end of the upper fragment being in front of the upper end of the lower fragment. Elevating the heel does not remove it. This is a very common deformity, and is sometimes very difficult to prevent. I now flex the leg on the thigh and place it on its outer side, thus relaxing the muscles at the back of the leg, and the deformity disappears as if by magic. I now replace the leg in the fracture-box without causing the displacement to return. The sides of the box are now brought up and secured by strips of bandage. The foot is to be slightly elevated, which is its natural position, and secured to the foot-board. The toes—not the entire sole of the foot—should rest against the foot-board. This constitutes the dressing; and it only remains now to suspend the box and limb.

TRANSLATIONS.

PHYSIOLOGICAL EFFECTS OF ACONITINE.—In the course of a series of researches into the physiological action of different varieties of commercial aconitine and pseudo-aconitine upon the muscles and nerves, conducted by Prof. Plugge, in the Pharmaceutico-Toxicological Laboratory in Groningen, Netherlands, during the past year, some interesting results were developed. Seven different sources furnished the alkaloids for the experiments, which were conducted upon frogs. The first end in view was to overthrow the view of Boehm and Wartmann, that aconite does not paralyze the motor nerves, in which he was completely successful; the second, to determine if any qualitative difference existed between the action of aconitine and pseudo-aconitine, but the experiments showed that no such qualitative difference existed. The results of the study are given as follows (the effects being identical in both varieties of frogs experimented upon):

1. Aconitine and pseudo-aconitine both exerted a paralyzing effect upon the pe ipheral, intra-muscular terminations of tl motor nerves, resembling curare in th respect.

2. The nerve-trunks were not paralyze by these alkaloids.

3. By aconitine and pseudo-aconiti the sensory nerves were either not par lyzed at all, or, at the most, only in a slig degree.

4. The view of Boehm and Wartman that the paralytic symptoms are attribut ble to a central action, he considered n to have been demonstrated; on the co trary, the origin of the general paralysis due to an action upon the peripheral t minations of the nerves.

5. The muscles retain their irritabilit even after poisoning by doses of aco tine from five to ten times larger th those with which the end-organs of t nerves are paralyzed. Neither aconiti nor pseudo-aconitine is a muscle-poisc The supposed resemblance (Weyland) l tween the aconitine- and veratria-mus was not established. The aconite musc curve is not at all different from the n mal muscle-curve.

With regard to the other sympton which were studied with less exactitu the following may be added in conc sion:

6. Fibrillary muscular twitchings w seldom observed, and decidedly do r form any constant symptoms of aconi poisoning in frogs.

7. Mydriasis often occurred, but was r always observed.

8. Separation of the skin also was f quently observed. The different kinds aconitine, however, varied in the amo of separation which they caused.

9. The respiration speedily declin and after a few minutes completely ceas This sign is very constant and charact istic.

10. Opening of the mouth, and app ently attempts at vomiting, appear alm always in the *rana esculenta* as well as the *rana temporaria*, and form a char teristic sign of aconitine-poisoning. T violence of the retching, however, var with the different kinds of aconitine.

11. The blood of the poisoned anim is generally of a dark violet-red color, that the distended veins look black. H ever, Friedländer and Schuchart's prep tions differed in this respect, that o

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very slight color-change in the blood followed their use.

12. The heart finally ceased in diastole, distended with dark violet-red blood; the auricles beating longer than the ventricles. The poisoned but still pulsating heart cannot be stopped either by electrical irritation of the vagus or through irritation of the sinus. The scarcely beating almost paralyzed heart, on the contrary, can be again brought into motion by electrical stimulation.—*Archiv für Path., Anatomie und Physiologie, etc.*, Bd. lxxxvii. Heft 3.

A CASE OF OLD HYSTERICAL CONTRACTURE SUDDENLY CURED BY THE ADMINISTRATION OF "FULMINANT PILLS" (MICA PANIS).—Cases of hysterical manifestations, especially of contracture, cured by strong mental emotion, are not very rare; but, since non-scientific minds persist in attributing certain of these cures to supernatural agency, it is not without interest to report one in which it is impossible to admit the mysterious intervention of occult or imaginary personalities.

A girl, 28 years of age, upon admission into the hospital of La Charité, gave the following history. After an attack of chorea, at the age of twenty, she had persistent feebleness of the limbs (?), so that she was unable to walk for two years. She then was well the next two years, but, being exposed to a fright, the chorea returned, and lasted five months; but this was followed by a sense of oppression and vomiting, which persisted for two years, when she entered the Charity Hospital, where she was vaccinated. This brought on a third attack of chorea, lasting two months only, but which was followed by contracture of both lower extremities. The patient was markedly hysterical, but there was no local anæsthesia at that time, although subsequently left hemi-anæsthesia was discovered. The condition of the lower extremities was that of spasmodic paraplegia. She had acquired the habit of receiving frequent hypodermic injections of morphia. As her demands for them were increasing, the attending physician, Landouzy, decided upon a radical step, and told the patient that she could have no more morphia, at which she complained bitterly. She was then told that in place of the punctures she would receive a medicine much more active, but which must be used very sparingly, because it was a violent agent. She was then given two pills of *mica panis*, with the recommendation to take them in four doses,—that is to say, a half of a pill each night and morning. At the regular visit, the next morning, the patient, contrary to her custom, was found happy and smiling. "I wanted to poison myself," she said, "and I took both of the pills last evening at once, contrary to orders. They produced a terrible effect on me,—I feel them still boiling inside; but look at my limbs!" Then she got up and walked around, slightly dragging the soles of the feet, but using the limbs with considerable facility. She begged for another pill, "in order to cure the feet completely." This was conceded, and on the 10th of October the invalid, who had not quitted her bed for eight months, was able to go about and assist in the service of the wards. At the end of the month she left the hospital entirely well.—*Revue de Médecine*, September, 1882.

The powerful mental impression made by the supposed "fulminant pills" was here sufficient to produce such a strong nervous reaction as to produce modifications, dynamic, organic, and functional, which terminated the paraplegia; just as another nervous reaction, such as a douche or an electrization, for example, might produce a paraplegia.

THE PHYSIOLOGICAL FUNCTION OF MICROZYMES.—In a communication to the Paris Académie de Science, M. Béchamp, having found alcohol in the liver, the brain, and the muscular tissue of animals, in the fresh milk of the cow and the ass, and in the urine of total abstainers even, claims that the microzymes (micrococci, spores, etc.) which are constantly found in the blood perform an important physiological function, analogous to fermentation outside of the body, and the products are the same,—alcohol, lactic and butyric acids, etc. The cause of decomposition after death, these ferments are also capable of producing disease during life, though not attacking albuminoid or gelatinogenous material (either before or after their evolution into bacteria) until after the destruction of the carbonaceous or glycogenous substances. He further states that all his observations tend to demonstrate that the microzymes in organisms are agents chemically and physiologically active in all the transformations which are accomplished both during life and after death.—*Bull. de Thérapeutique.*

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PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, OCTOBER 21, 1882.

EDITORIAL.

THE INTRODUCTION OF THE CULTIVATION OF CUPREA BARK TREES INTO THE UNITED STATES.

MANY years since, the American Medical Association appointed a committee to consider the cultivation of the cinchona in the United States. The committee considered, and, it may be, are still considering,—perhaps finally will discover what is at once apparent,—that the climatic conditions necessary for the growth of these trees do not exist in the United States. We have always believed associations and committees to be about as useful in the doing of scientific work as a Cape-Colony trek-wagen, with its ten span of oxen, would be in a trotting-match; and so it has been in the present instance. Nothing has been done, no new light shed, and when the opportunity has come it is not noted.

As early as 1820, a Brazilian surgeon, by the name of Remijio, pointed out to his countrymen that the bark of certain small trees or shrubs growing in Brazil is as effective as the Peruvian bark in malarial fevers, and ever since, in Brazil, these plants have been known by the names of *Quinia de Sera*, or *Quinia de Remijio*. St.-Hilaire placed these shrubs in the genus Cinchona, as C. Remijiana, ferruginea, and Vellozii; but De Candolle erected them into a new genus, Remijia, which has since been universally recognized by botanists. It is distinguished from Cinchona by the fruit-capsules opening semi-loculicidally, by its peltate seeds, and by its inflorescence in elongated axillary racemes with opposite fascicles of flowers. In 1857, new barks appeared in the London market, but only within the last few years have these so-called *Cuprea* barks appeared in large quantities. For several years, it is stated, a single firm controlled the whole business of collecting and exporting the bark, which they affirmed was used for dyeing and was of but little value. So they kept the mine of wealth in their own hands, until the great size of their shipments excited so much attention that concealment was no longer possible. Then a rush to the forests, comparable to that to gold-mines, occurred, and the whole business of Colombia is said to have been demoralized: agriculture was neglected, clerks left their desks, exchange became irregular, and the "fever" raged universally.

The bark has been sent to London in such enormous masses as to break the whole cinchona market. It has also been largely used in this country. Mr. S. G. Rosengarten states that the bark reaches us from London, and also directly from Colombia. There are two distinct regions which yield it: one is the lower part of the basin of the Magdalena River, in the province of Santander, the trees growing in the mountain-chain of La Paz, and the port of export being Bucaramanga; the other is the basin of the Orinoco, among the mountains which constitute the eastern branch of the Cordillera of the Andes.

These barks vary in the percentage of quinine they contain. Mr. Rosengarten informs us that the yield in their laboratories has been from one to two per cent., and that usually the bark is remarkably free from inferior alkaloids. The complete absence of cinchonidine is said to be characteristic of them. Messrs. D. Howard and I. Hodgkin, Dr. B. H. Paul, and Mr. Cownley and Mr. T. G. Whiffen almost simultaneously announced the discovery in them of a new alkaloid, *homoquinine*, or *ultraquinine*, which there is reason for believing is a double salt of quinine and quinidine. The characteristic chemical product of the bark is, however, the

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alkaloid *cinchonamine*, whose right to a separate existence seems to be well established.

Mr. Bentham states that the genus Remijia comprises thirteen species. According to the researches of José Triana, only two of these, R. Purdieana, Wedd., and R. pedunculata, Triana, yield Cuprea bark of commerce.

The important fact connected with these trees is that they grow in a rather dry climate, in position a little above the level of the sea, and hence without doubt can be cultivated in many intertropical countries where the Cinchonas will not grow. There is good reason for believing that they would flourish in Southern California and in some of the Gulf States. The people of the United States are now absolutely dependent upon the outside world for the means of combating the malaria which is so deadly in much of our territory. Were it not for quinia, we believe, ten per cent. of the whole population of many districts of the country would be ill every autumn. Yellow-fever epidemics make much noise, because their effects are so concentrated and apparent; but three autumn months without quinine would probably witness more deaths from malaria in the United States than yellow fever has caused among us during the century. The fiscal returns indicate that over a million of ounces of quinine are used in ordinary healthful years in the United States; and in some years the amount probably rises to nearly a million and a half ounces, or forty-five millions of full antiperiodic doses. So much of tribute to South America and India. More than this, what should we do if the supplies were cut off?

We have, practically, no navy, and until politics are reformed and placemen give way to officers chosen for ability, shall have none. In a war with Great Britain, with blockaded ports, malaria would find its opportunity. Is there not, then, one Congressman with energy and brains who will take up this subject and put through Congress a bill to send botanical collectors to the cuprea districts, to study the conditions and habits of growth, to collect trees, seed, etc., and to make an effort for culture at home upon a large scale? If successful, the pecuniary returns would be enormous; and it would probably be worth while for some rich capitalist to make the venture as a speculation, if Congress be too busy improving ditches to pay attention to a matter like the present. The Indian cinchona-plantations are said frequently to pay seventy per cent. of their cost in a single year, and to continue in bearing for decades,—indeed, under either the "mossing" or the cheaper "coppicing" system, for indefinite years. Cutting down a cinchona is followed by an uprising of shoots, precisely as with our chestnut-trees, and the eighth year these shoots yield the richest bark: this is "coppicing." "Mossing" is taking off strips of the bark and protecting the bared wood by moss, so as to let the bark form again.

We are not sure but that the "Agricultural Department" might very properly take this subject in hand, and, if it have not the means immediately to take active measures, send a report which shall wring from Congress the necessary aid. The cry of "quinine forever" might be as popular a political war-cry as was "free quinine," a few years ago, in the malaria-scourged Southwest.

Prof. Baird, of Washington, seems to hold, by some mysterious power, Congress in the hollow of his hand. The many thousands which are spent yearly under his immediate supervision in the fisheries work, National Museum, Smithsonian Institute, etc., are as honestly and wisely spent as they are shrewdly won; but no one thing that he has as yet achieved would compare in usefulness with the formation of cuprea forests in the United States. Can he not spare time to obtain means for and to organize such work, in connection with the National Museum?

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VACCINATION *VS.* PROTECTIVE INOCULATION.

PASTEUR having conducted a series of experiments with regard to a certain form of contagious disease in cattle, the medical journals almost universally speak of the operation as charbon-vaccination. It is time that this abuse of the term vaccination were corrected. What Lady Mary Wortley Montague introduced into England as a prophylactic measure against smallpox was inoculation *with* smallpox. It had its inconveniences; it was uncertain in its effects, spreading the disease, and occasioning deaths now and then; but still it was based upon experience, and it served its purpose. When vaccination came, however, inoculation ceased by common consent, and it is now generally interdicted by law. Whatever refinements Pasteur and his school introduce with regard to the cultivation of the contagium vivum, they still propagate the disease by using the morbid products of the identical affection. All that they claim is that, by inducing a mild attack of the disease which the animal survives, it is shielded from subsequent attacks by the self-protective power of the malady itself. Now, vaccination in the human subject *never* causes smallpox.

Though Jenner and some of his successors believed that vaccinia is simply a modified form of smallpox, yet this remained until quite recently a probable hypothesis without proof. The experiments, however, of Dr. Voigt, Superintendent of the Vaccine Institute at Hamburg (*Deutsche Vierteljahrsschrift für Oeffentliche Gesundheitspflege*, Bd. xiv. Heft 3), have, it is claimed, finally demonstrated conclusively the possibility of transmuting the most virulent variolous pus into vaccine lymph, which possesses all the usual characters, and which is now being used successfully for public vaccination in this Institute. But protective inoculation for charbon cannot be properly termed vaccination, the virus not being that of vaccinia, nor even derived from the cow.

PARTLY owing to the stimulus given by the Johns Hopkins University, but chiefly to the increasing scientific tendencies of the better portion of the American medical profession, the original study of physiology is evidently making progress among us. As a striking instance, we may cite the last number of the *Journal of Physiology*, edited by Prof. Michael Foster, of Trinity College, Cambridge. In it there are original contributions by thirteen authors, of whom no less than ten are Americans, one of the remainder being a German. All of the American papers except one seem to have been worked out in America.

THE Seventh Annual Meeting of the American Academy of Medicine will be held in the Hall of the College of Physicians, Thirteenth and Locust Streets, Philadelphia, on Thursday, October 26, at 3 o'clock P.M. Dr. Traill Green will deliver an address at 8 P.M., in the College. The general profession is invited to be present.

LEADING ARTICLES.

VACCINE ESTABLISHMENT OF BELGIUM.

THIS establishment, which is now completed and in operation, promises to afford most valuable statistics, and to be of great value to its own country and to other countries by the example it furnishes for them to imitate.

The new neat brick building is placed in one corner of the botanical garden of the School of Veterinary Medicine of Belgium at Cureghem.

On one side of a corridor is a stable, with accommodations for twenty calves, and adjoining is the operating-room, with two tables furnished with braces and hobbles for properly restraining the animals.

On the other side a room with cabinets and refrigerator for preserving the virus, the office for records, and a handsome parlor for the committee, are conveniently situated.

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The direction is formed of a committee of Doctors of Medicine and of Veterinary Medicine under the Presidency of M. Theirnesse (Director of the Veterinary School and Secretary of the Royal Academy of Medicine). The animals, calves of variable age, are inspected, in order to insure perfectly healthy subjects before being used.

On three successive days of each week one or more animals, according to the demand for vaccine matter, are inoculated.

This is accomplished in the following manner:

The belly is thoroughly washed, and then shaved from the inside of the thighs forward to the middle of the sternum and on each side beyond the elastic aponeurosis.

The matter is then inoculated in series of lines two inches in length.

The calf is numbered and recorded, together with the source of lymph employed, and a clinical record is kept each day of the animal.

On the sixth day the animal is placed on the table and the virus collected as follows:

The vesicles, which are two inches in length and a half-inch in width, are lifted by lock-forceps placed on the sound skin each side, the crust is broken by passing the finger over it, and the serum, which exudes for the moment or two following, is collected on the point of a spatula and transferred to a small cup.

The surface covered with the broken crust is then scraped, and the "raclée" (the most valuable part) is placed in another cup.

This manual on a single animal occupies the time of one operator for over an hour.

The other operators in the mean time prepare the virus, taking each few grammes as fast as collected, in order to avoid a longer exposure to the air than is necessary.

The serum first collected is mixed with glycerin, to insure a more equal density, a few drops of a one per cent. solution of carbolic acid are added, and then fusiform capillary tubes are placed with one end in the mixture to fill themselves.

When filled, each end is hermetically closed with sealing-wax or with paraffine and collodion.

Occasionally ivory points are also used, as in America.

The "raclée" is also treated with glycerin and carbolic acid, and is ground in a mortar until an even pulp is produced.

It is then, in drops of variable size, according to its destination, placed on square plaques of glass, another glass is applied as a cover, and the four edges are dipped in hot paraffine.

Each preparation is placed in a wrapper, numbered individually and in series corresponding with the animal, and when not sent immediately for use is kept in the refrigerator.

Copies (translated) of the forms and blanks employed will give concisely the means used for furnishing the virus and for obtaining the statistics.

With each point, tube, or plaque is a small circular, with the following:

"CENTRAL VACCINE OFFICE OF THE STATE AT THE VETERINARY SCHOOL (BRUSSELS, MIDI).

"By Article 2d of the Royal Decree of February 15, 1882, the object of the Vaccine Office is to furnish animal vaccine to public administrations, to physicians of the country, and also to private persons, who will demand it *by writing* from the Director of the establishment.

"Burgomasters and physicians will have the privilege of free postage on the condition of their sending their requests *open*, with the signature and 'Demand for vaccine' on the envelope.

"Private persons should have their requests approved by the burgomaster or by a physician confirming the need of vaccine matter.

"Their letters should be stamped. The office furnishes the vaccine on points, in tubes, or in plaques.

"In each demand one should—1st, indicate the form in which it is desired; 2d, give exactly the address; 3d, give definitely the quantity to be furnished, or, better still, the number of persons to be vaccinated. The vaccine is furnished and sent by the post GRATIS.

"It is recommended to employ it, when possible, in the two days following its reception.

"*The result of vaccinations and of revaccinations being obtained, the vaccinator should fill the enclosed Bulletin and put it in the post.*"

On the opposite side of the circular are directions for the use of the points, tubes, or plaques. The bulletin is a card (postal), with, on one side:

"*Free postage*" and the address of the Director.

On the other:

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"BULLETIN OF VACCINATION.

"No. —. Vaccine of calf No. —.

1st. Result { of primary vaccinations { No. of success, —; " unsuccess, —
of revaccinations { " success, —; " unsuccess, —

2d. Observations relative to the sequelæ of the inoculations.

"(Signature of the vaccinator)."

The points or tubes, in a small wooden box, are enclosed with the circular and the blank bulletin in an envelope and sent postage free.

The plaques are folded in a label bearing the date, number, and number of calf, and mailed with the address attached to a tag, and at the same time the necessary blanks are forwarded in an envelope.

With this thorough detail the circumstances which modify the preparation and preservation of vaccine matter will soon be detected, and the means are furnished which will prove the success or the unsuccess of all experiments made with the virus.

In addition, vaccination is rendered almost compulsory by the fact that no movement in life requiring a registry, such as entering schools or colleges, obtaining permission for a vacation, holding any office, or doing any public work, however subordinate, entering the army, getting married, etc., can be done without presenting an attested certificate of vaccination and revaccination, with the results.

RUSH SHIPPEN HUIDEKOPER.

PROCEEDINGS OF SOCIETIES.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

A CLINICAL meeting of the Society was held at the hall of the Society, September 20, 1882.

DISCUSSION ON RENAL CALCULI.

Dr. Toboldt said that benzoic acid was not only so disagreeable that few patients would take it, but it was also quite insoluble in water. Some of its compounds, such as potassium or sodium benzoate, would be far more suitable, both as to convenience of administration and solubility.

Dr. J. L. Ludlow had never used benzoic or boracic acid in such cases; not from any prejudice, but simply because he had used with marked success ever since he was a resident physician in Philadelphia Hospital, in 1841–42, the pure liquor potassæ, well diluted, in all cases of uric acid calculi, or gravel, being before Dr. Johnson mentioned it in his work. In the first case everything had been used, out of the hospital, by most of our physicians, for the patient was a worthy woman, and had numerous friends who had interested themselves in her behalf, but was at last compelled to enter the hospital, as she was very sick and poor. As a final resort, he determined to use his solution of potash in uva ursi tea, and with the most charming success. Here it is to be noted that in such cases it is necessary to impress upon the patient's mind close watching of the urine, and to resort to the remedy as soon as the slightest symptoms occur, and regulate the diet accordingly. Dr. Ludlow also exhibited some calculi of uric acid, which he obtained from one of his patients during the summer, which are the largest he had ever seen passed through the male urethra. The largest was three-quarters of an inch in the long diameter and one-quarter of an inch in the short diameter. These were passed after the use for some time of the liquor potassæ in an infusion of broom-corn seed, one ounce to a pint, which he used because highly recommended by Dr. Garnett, of Washington: it is pleasanter to the taste than the uva ursi.

In regard to the phosphatic calculi, he had met with much success by the continued use of nitro-muriatic acid, in either uva ursi, watermelon, or other diluents.

Dr. O'Hara recommended the use of Hydrangea arborescens, in infusion with alkalies, for the uric acid diathesis. It was used by Dr. E. Butler, long residing as a missionary among the Cherokee Indians, with great apparent advantage in their calculous complaints.* The late Dr. W. Lathe and many others have used it successfully.

He spoke of a case which recovered without any special treatment, not accompanied with symptoms of renal colic, in which the first symptom of the ailment was the discharge of two large stones into the chamber-utensil. It was in the case of a man eighty years of age, whose symptoms were gastric rather than renal, though there was some tenderness about the loins, and some hyaline casts under the microscope.

Dr. Blackwood referred to a paper read some months ago by Dr. A. H. Smith, in which the use of calcium benzoate was recommended as a good diuretic, and he had found it, in practice, to be such. In his treatment of the cases of urinary deposits he was in the habit of recommending patients to drink largely of common water.

Dr. Leffmann said that in these cases of urinary calculi the rational treatment was that based upon the chemical principle that uric acid is rendered soluble by alkalies, and phosphates are dissolved by acid. It must be remembered that the alkaline salts of organic acid are excreted in urine as carbon-

* Wood and Bache, U. S. Dispensatory, 13th ed., p. 1665.

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ates, and hence will render the urine alkaline. Calcium benzoate could not, therefore, be substituted for benzoic or boracic acid in Dr. Walker's case. It was necessary to use the free acid. Dr. Tyson, in a paper read before the Society several months ago, had called attention to the serious injury that would result from not recognizing the chemical changes which remedies produced in the urine. In all cases of urinary deposits the method referred to by Drs. Ludlow and Blackwood—viz., the liberal use of drinking-water—was good practice.

Dr. Walker said the case he had presented was certainly one that would not permit the use of any remedy causing alkalinity in the urine, and, as Dr. Leffmann had remarked, the free benzoic acid, or some other acid which would be excreted as such, was required. In reply to an inquiry, he said that the boracic acid was given in powder. Calculi are to be treated chemically. Roberts had shown, for instance, by experiment, that uric acid was more rapidly dissolved by solutions of lithia than by other alkalies, and he preferred the lithium citrate in such cases. Calcium benzoate had been used with success in amyloid degeneration of the kidney, but was not appropriate in a phosphatic diathesis.

MALIGNANT TUMOR OF ORBIT, NOT IMPLICATING VISION, BUT CAUSING EXTREME EXOPHTHALMOS.

Dr. Charles S. Turnbull, through the courtesy of Dr. B. F. McElroy, exhibited a case of a single woman, aged 37, in whom extreme exophthalmos of the left eye was caused by a malignant postocular tumor, which, he thought, had its origin at the base of the skull, or perhaps in the sphenoidal cells, as there was nose-implication. The growth in its malignant development had invaded and occluded both nostrils. It could be seen, by the aid of the nasal speculum, filling up the right nostril. It had pushed the septum far to the left, and by pressure perforated and by bone-expansion invaded the left orbit, and forced the left eye so far forward that even gentle manipulation caused the lids to spasmodically close behind the globe.

The vision was unimpaired; the action of the ocular muscles was but slightly interfered with, although the globe was displaced, not only outward, but also downward, at least three lines below the level of its fellow. Up to the time of the appearance of the exophthalmos the patient had been treated for "catarrh" and nasal polypus. The prominence of the eye had been noticed about a year ago, while the "nasal catarrh" was of old standing. The sense of smell had been lost for years. The patient's mind seemed clear, and she supported herself by needle-work, although she states that at times she feels dizzy and has spells of being "out of her head." There was no general paralysis nor any evidence of encroachment by the growth in the direction of the cranial cavities. On the contrary, the patient was stout, and appeared, apart from a peculiar cachexia, to enjoy excellent health. Pain, as a symptom, has been absent, and there is no abnormal sensibility of the growth either as felt through the upper lid in the orbit, or as incised through the dilated nostril. Through this incised wound a large probe could be passed from three to four inches either backward or outward, and upward in the direction of the orbit. In fact, the patient said she felt the probe behind her eye. Dark grumous blood, in small quantity, followed the withdrawal of the probe.

Dr. Julian J. Chisolm, of Baltimore, records "Two Cases of Malignant Tumor of the Sphenoidal Cavities, implicating Vision" (*Archiv. Ophthal.*, vol. xi. No. 1). Dr. Chisolm says that the two reported make four cases of this serious lesion which he has seen in the past ten years.

In both of these last cases the disease seemed to have started on the right side of the bone at the base of the skull.

The eye-complication was recognized as of postocular origin, and the lesion was located about the sella turcica, on account of the ophthalmoscopic appearances of the disks and the disturbed action of the eye-muscles. In both cases the left eye became secondarily involved, both as to the functions of the optic nerve and the action of the muscles moving the eyeball. In each case the nose-implication was subsequent to the eye-trouble. The first action of the growth in its malignant development was to invade by bone-expansion the optic foramen at the apex of the orbital cone, and impress the structures passing through this opening, then slowly involving contiguous parts, until both sides of the skull about the median line became affected. In both cases progress was slow, requiring many months for development. In each treatment was unavailing to stop the steady growth of the disease, until one succumbed to the general poison, and in the other life seems to be rapidly ebbing away amidst severe torture, which morphia, in large doses and frequently repeated, can scarcely mitigate.

One case was in a boy 7 years of age; the other in a member of the medical profession, aged 37 years. The two cases have in common a malignant growth at the base of the skull, destroying sight, then developing in the direction of the face, filling the eye-sockets, pushing out the eyeballs, invading the nares, and exhibiting a striking similarity in the disfigurement produced. There are symptoms peculiar to each. The youth suffered no pain whatever when the disease was making rapidly fatal progress. The older patient, on the contrary, has suffered severely from the very beginning to the end of his trouble,

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and the intense agony of his every-day life has shown no mitigation. The younger case commenced with nausea and vomiting, and with headache. In the elder the nausea, with vomiting, appeared among the last symptoms. In both the mind remained clear throughout. In both the disease extended from right to left.

In the youth death apparently came from exhaustion and septic poisoning. The eyeballs protruded in excessively hideous deformity. Bleeding fungous masses protruded from each nostril, and could also be seen behind the palate. These emitted a most offensive odor. His hearing was only implicated a few days before his death. There was total absence of pain. No post-mortem examination.

Dr. Turnbull's case, although evidently similar to the cases of Dr. Chisolm, seemed to have had its origin near the base of the skull, but the eye-symptoms, in so far as they attracted the patient's attention, were secondary to the discomfort and obstruction of the nares. Operative interference he thought ill advised, as in his experience such growths not only recurred, but grew much more rapidly after having been disturbed.

Dr. Turnbull also exhibited a case of epithelioma of the right upper eyelid, in a man aged 67. The entire lid was involved, so that the eye could with difficulty be seen, especially as several small tumors (the size of a pea) sprung from the inner surface of the lid. The patient had never suffered any inconvenience until the lid was scarified " for thickening and redness." Induration was marked, and the cachexia pronounced. A plastic operation, with a sliding flap, was proposed after total removal of the diseased lid, the flap, according to Dr. Garretson's plan, to be taken from the opposite side of the forehead.

DISCUSSION ON TINEA DECALVANS.

Dr. John V. Shoemaker did not entirely agree with the views advanced in the paper. He had not been able to find a parasite at any time in the round or circumscribed spots referred to by the speaker, and also spoken of by Fox, Bazin, Hardy, and others as tinea decalvans, but properly called by the German and American writers alopecia areata. He did not use, at the present time, when treating the generally-accepted parasitic affections, epilation of the hairs, which was very painful, often increasing the irritation of the parts, but depended entirely upon local medication. If he found it necessary to remove the hairs in parasitic cases, and there was no objection to destroying them permanently, he had employed, in place of epilation, electrolysis, with a very small needle, and from four to twelve cells. The operation was comparatively painless, the hair being quickly, and often permanently, removed, and the parasite usually destroyed.

For the class of cases, however, me by the speaker, as well as in ringw which a parasite has to be destroyed, used in both affections—although the a different nature—the ointment of ei oleate of copper or of mercury. Th either of these ointments, rubbed i and morning, with appropriate intern treatment, was usually followed by cessful result.

Dr. O'Hara had seen much succe the copper oleate, notably in one tinea versicolor. It was of two years ing, and extended over the front of th One week's application cured it, an has been no return in six months' tim

For bald patches on the head he ha a strong solution of muriate of ammoi serviceable. It appears to have a stin effect upon the minute nerves of th and will be found to be of service i ache or fever.

Dr. Ludlow inquired if Dr. Shoema any experience with white precipita ment in these cases. It was an e remedy, but must be freshly prepare of service. He would also like to kn long the disease usually lasted after t per oleate was used, and whether treatment was given at the same tin believed that some of the cases deper kidney disease.

Dr. Mills said that while electro probably the best method, perhaps t method, of destroying the hair-bulbs in his experience very painful, and patients so severe as to be scarcely b

Dr. Shoemaker replied that he had fully the action both of white precipit other mercurial salts incorporated in dinary ointment and in the petroleu ucts, and had known of and seer failures in destroying the fungus of tr sitic affections. For instance, in rir after the parasite has been destroye surface, by the ordinary mercurial s referred to, the fungus, after a time, again propagated from the inside of licle outward. He had, therefore, be with success, in many cases of parasit tions, either the oleate of copper or of n as the oleate would, by its deep an trating action, kill the parasite not the surface, but also deep down in the The ordinary ointments, however, fulfil the same indications, and will upon the surface. In the majority he depended mainly upon this tre without disturbing the diseased hair. versicolor he had had great succe the oleate of copper, and mentioned good results. He did not always em ternal treatment, except when th showed indications for using it.

Dr. Cummiskey said that epilation v paratively painless when confined

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diseased hairs, but the extraction of sound hairs was more or less painful. Even then, however, the pain might be considerably lessened by the use of oil of cade, as recommended by Bazin, for a day or two previous to the operation, the oil obtunding the sensibility of the scalp and making the extraction easier. Chloroform may also be used locally. He thought that kidney and liver diseases were often associated with or preceded parasitic disease, producing a condition favorable to the growth of the parasite, and without which it would fail to exist. Where this condition did not exist, the fungus failed to communicate itself, and therefore some dermatologists, not recognizing the case, believed the parasite of tinea decalvans not communicable.

DISCUSSION ON INTRAVENOUS INJECTION OF AMMONIA IN SEWAGE-POISONING.

Dr. O'Hara had seen the patient, and could bear testimony to the fact that the ammonia had done no harm. It was a singular thing that Boehm, in his article on poisons (Ziemssen, vol. xvii.), says that "the degree of concentration which ammonia fumes can attain in badly-appointed privies is often so great that under certain circumstances they may even cause serious poisoning." He did not think that this was the case here, but even were it so it would act the same as sulphuretted hydrogen, by producing asphyxia or suffocation. As to the use of ammonia in the mode mentioned, he took it to be a direct irritant of the respiratory tract in the medulla oblongata. Boehm says the irritation ensuing after the absorption of poisonous quantities is so intense that it even leads to a marked acceleration of the breathing in animals whose nervi vagi have been previously severed, and this fact affords a theoretical basis for the employment of injections of ammonia, which have been recommended in the treatment of certain forms of asphyxia.

He believes that it is the forced respiration induced that does the good, and would think artificial respiration ought to be carried on in similar cases.

It seems to be safe to inject into a vein, yet he desired to mention that Paget reports a case in which a dilute solution of ammonia was injected into a nævus in a child two years of age, who died in convulsions immediately after the injection. (Ziemssen, xvii. 361.)

Dr. Toboldt detailed a case of a child which had fallen into a privy-well, and which presented symptoms similar to those enumerated by Dr. Eskridge. When he saw the child it was unconscious, cold, and blue. He used artificial respiration; consciousness was restored, and convulsions set in. He used an emetic of mustard, and an injection of soap-and-water, which brought on vomiting and purging and secured relief. He ascribed the symptoms to asphyxia.

Dr. Mills thought the case a remarkable one, and that the recovery was due to the treatment. He recalled notices he had seen of cases of snake-bite treated by intravenous injection of ammonia. The direct effect of ammonia was to prevent coagulation. He could give no explanation of the unilateral convulsions which had been observed.

Dr. Parish pointed out that in most cases of death from poisonous gases the blood was liquid, not coagulated, and therefore ammonia would not be likely to act as an antidote by controlling coagulation. He inquired if Dr. Eskridge was certain that this was the strongest aqua ammoniæ.

Dr. Eskridge, in closing the discussion, called attention to the fact that the case was not one of ammonia-poisoning, but one of poisoning by hydrogen sulphide or ammonium sulphide. Dr. Toboldt's case, he thought, was not one of true sewer-gas poisoning. An open well filled to nearly the level of the surface of the surrounding earth, as was the case with the one into which the doctor's little patient fell, was not a place that would admit of the accumulation of noxious gases. Besides, all sewer-gas did not contain the true sewer-poison, and the emanations from cesspools and sewers did not always contain hydrogen sulphide or ammonium sulphide. In association with Dr. Leffmann, he had made experiments on this point, and had been unable to find those substances in cesspool-emanations.

The statement had been made by Dr. Parish that the blood in the heart is fluid in cases of death from sewer-gas poisoning. If this be so, the ammonia injections did not prevent the formation of heart-clot. The view is probably correct for poisoning from sulphuretted hydrogen, where death has been immediate, but in cases where life has been prolonged several hours it is possible for a soft heart-clot to form irrespective of the condition of the blood. It is probable that the inability of the left ventricle to empty itself is a greater factor than the condition of the blood in the formation of heart-clot.

The usual post-mortem appearances in cases of sulphuretted hydrogen poisoning are congestion of most of the internal organs, especially of the lungs, liver, spleen, and kidneys, and distention of the heart with blood. It is not stated how long life had been prolonged when these alterations were found.

In Paris a large number of horses and asses are annually slaughtered for food, and the demand is reported to be increasing. On the other hand, we learn from the *Medical Times and Gazette* that in London a quantity of horse-meat was recently seized in a sausage-maker's shop and the owner fined for using meat "unfit for the food of man," and it was ordered to be destroyed.

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NEW YORK COUNTY MEDICAL SOCIETY.

REGULAR MEETING, SEPTEMBER 25, 1882.

DR. F. R. STURGIS, PRESIDENT, in the chair.

AFTER the nomination of officers for the coming year, the scientific paper of the evening was read by Dr. W. F. MITTENDORF. It was entitled "*Myopia, and the Necessity of Correcting it by Glasses.*"

Dr. MITTENDORF said: Myopia has justly been considered a disease of civilization, and unless this is appreciated, and proper measures are taken to prevent it, it must necessarily spread. Dr. Loring had read an able paper before the Society in which he spoke specially with reference to the causation of the disease, while the author's paper had special reference to preventing an increase of the myopia after it is once developed.

Myopia depends upon an elongation of the eyeball, and the greater the degree of the elongation the greater the degree of myopia; and this is the reason why myopic eyes are rather prominent. This contrast is specially striking in persons who have one near-sighted and one far-sighted eye, the far-sighted eye being small and flat, the near-sighted one being large and prominent.

The question then is, What is the cause of the elongation of the eyeball? It would appear natural that this should be congenital; but such is not the case. Of new-born infants examined most carefully, only very few were found to be myopic. In order to become myopic the eye has, therefore, to change its shape, and myopia is, with few exceptions, an acquired condition. The reverse holds true in regard to hypermetropia. This is always congenital. After an eye has become once longer, unfortunately we cannot make it shorter again. We can, therefore, prevent near-sightedness, but we cannot cure it. We can only watch that it may not increase, and that our patients do not become excessively near-sighted or lose any of their power of vision. To do this effectually we must consider the causes of the affection, and the time in which it is apt to develop.

The next question is, whether there are eyes that have a greater tendency to acquire this condition than others. Undoubtedly this is the case; and under this head we have to consider two important factors: the one is heredity, and the other is debility, or want of resistance, of the sclera.

In support of the heredity of myopia, the result of the examination of school-children by Dr. Derby and myself is of importance. The myopic eye was found among Jewish and German children more frequently than among American and English. The great frequency of this condition among the Jews is due, perhaps, to some extent, to the habit of intermarrying. Of 45 myopic Jewish children, 18, or 40 per cent., came from myopic families; of 82 myopic German children, 29, or 35 per cent., came from such families; but of 160 American children who had myopia, only 49, or 31 per cent., came from such families. A striking case of this kind is the following. Mr. H., an English Jew, very myopic, lost one eye in consequence of it. He has seven children, and of these five are near-sighted,—some of them to an alarming extent. It is surprising that not more hereditary myopia has been found among the 2000 children examined by Dr. Derby and myself. Of this large number 257, or about 12 per cent., were near-sighted, and of these only 51 came from myopic families.

The other condition, weakness of the sclera, is perhaps one of the most frequent and dangerous of all causes, as it is apt to last during lifetime, and lead to those high degrees of myopia which are frequently followed by loss of sight. It is apt to come on after debilitating diseases of childhood. A case of this kind is the following. A young lady, in whose family no myopia existed, was taken sick with scarlet fever when seventeen years of age, and, although she had excellent eyesight up to that time, she became so near-sighted within eighteen months afterwards that she was obliged to get medical advice, and now, three years after the attack, she requires a minus-five glass, and has only two-fifths of her visual power left. This cause leads also to myopia in illiterate people, and is, of course, of more frequent occurrence in countries where the lower class of the people are insufficiently fed, or where they are educated to debilitating vices. In Italy a large number of recruits are exempt from military service on account of a high degree of myopia, and yet a large percentage of these can neither write nor read.

Defects of the eye itself constitute another cause. Such eyes may require great accommodative efforts, especially for near-vision. Of these, an irregular curvature of the cornea, astigmatism, is of importance. A striking example was given. Slight opacities of the cornea likewise lead to changes in the eye, but dense opacities will exclude vision to such an extent that the eye is rarely used. An example was given.

But of the greatest importance is the occupation with small and near bodies continued for a long time. Prof. Cone was the first to call attention to the fact that school-children became more near-sighted in proportion to the length of school life and the time employed over study. A large number of school-children have been examined in Europe and in this country. In a paper read before the German Scientific Association, I have already given the result of Dr. Derby's and my examinations of more than 2000 school-children. In the primary department we found myopia among 3 per cent. of the scholars. In the best grammar-school of the city, 896

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scholars were examined, and 119, or 13.5 per cent., were found to be near-sighted. The percentage of the American myopes was 10, that of the Germans, 17.5. In Columbia College 201 students were examined; of these 69 were near-sighted, or 35 per cent., the percentage being greater in the academical department than in the school of mines, and greatest in the senior class. Not only is a literary occupation liable to lead to myopia, but our entire mode of living, sedentary occupations, want of out-door exercise, may lead to it; and for this reason the wife of the city laborer, for instance, spending her life mostly in-doors, is in greater danger of becoming near-sighted than a man whose work calls him into the open air, where he has opportunities to look at distant objects. Even domestic animals begin to feel the effects of this mode of life, though, as is well known, they are usually hypermetropic. An amusing case of this kind occurred in Germany. A gentleman had a fine horse, which was, however, intractable. It was found on careful examination to be near-sighted, and a pair of concave glasses cured the animal of its evil habits. Spectacles will also cure the bad habits of children. This has been pointed out by Dr. Noyes and Dr. Loring. A near-sighted child, for instance, does not see as well as its playmates, who will not be slow to take advantage of this in school and at home. Not being able to become as well acquainted with its surroundings as the other children, it is apt to be looked upon as a dolt and slow, and thus the child, not being appreciated, prefers solitude, takes to reading a great deal, neglects out-door exercises, becomes morose, and its mode of life favors a further development of the myopia. Supplied with proper glasses, everything is changed, and the child's opportunities are greatly improved.

Of the greatest importance, however, are the changes that take place in the interior of the eye, due to stretching of the more delicate inner structures. There is a great deal of difference in the degrees of this affection in this respect, and, whilst a slightly myopic eye is considered comparatively safe, a highly myopic one is not only apt to suffer impairment of vision, but may become entirely blind. It should be, therefore, our main object to prevent the development of the myopia to such an extent.

In order to change the shape of the eye, the sclera must be yielding at the time when the child is growing, especially if an inherited weakness of it exists, or if debilitating diseases should have reduced its power of resistance. This is the reason why reading, drawing, writing—in fact, all accommodative efforts and convergence—should be avoided after the debilitating diseases of childhood. The most dangerous time, ordinarily, is that between five and sixteen years of age. It is only in rare cases that it develops in an older person than twenty years. Another dangerous period is at the time when the lens becomes hard and less elastic. The myopic eye differs from the normal one not only in shape. The choroid and retina are gradually stretched and apt to be easily irritated. Atrophic changes of the choroid will form, especially in the neighborhood of the optic disk and in the region of the macula lutea. It was formerly supposed that the white crescent, which is known as a posterior staphyloma or cone, was entirely due to atrophic changes, but, according to the latest investigations, its beginning is due to traction of the choroid on the optic nerve, sheath, and the lamina cribrosa, and, according to Paulsen and Weiss, dragging over of these parts leads to the beginning of posterior staphyloma. Later atrophic changes of the choroid cells of the pigmentary layer take place, the vitreous humor suffers, which leads to the appearance of muscæ volitantes, about which near-sighted people complain so much. Later, a serous infiltration and plastic exudation take place into it. The greatest change is, however, found in the ciliary muscle, which was pointed out first by Iwanoff. This muscle is composed of two sets of fibres, the circular and the longitudinal ones. In the normal eye the longitudinal ones slightly predominate, in the hypermetropic eye the circular ones are more abundant, and in the myopic eye the longitudinal ones are greatly in excess. It was supposed that, as in myopic eyes no accommodative efforts causing increase of the curvature of the lens are called for, therefore the circular fibres are not needed; but it was never sufficiently explained why the longitudinal fibres should be so much more abundant when there was no work for them to do. Dr. Emmert maintains that the arrangement of these fibres is such that the circular ones will, by their traction, draw the ciliary body towards the lens, acting like a sphincter, thus relaxing the suspensory ligament of the lens, and allowing the lens to become more globular. The longitudinal fibres, which are interlaced with the former, will, by their action, draw the ciliary body, and with it the suspensory ligament of the lens, towards their point of insertion near the sclero-corneal junction. This must necessarily produce tension of the ligament, and as a result we get a return of the lens to its normal condition. We may even get a flattening of it, and with it a decrease of its refractive power. If an abnormal spasm of the circular fibres exist, the paralyzation of these by atropia gives the longitudinal ones greater power, by relieving them of the antagonistic action of the former, and the lens will become flatter. This is the reason why even in myopic eyes the use of atropia diminishes the amount of the error of refraction. The lens becomes flatter, and it takes a weaker con-

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cave glass to focus the rays upon the retina, whilst in hypermetropic eyes a stronger convex lens is now required for the same purpose. This is exactly what the myopic person needs. The focal point of his dioptric apparatus is in front of the retina, and by diminishing the refractive power of the lens this point is brought nearer to the macula lutea. Knapp, Helmholtz, and Rheich have demonstrated by measurements that the lens of myopes becomes flatter for distant vision than that of the emmetropic eye. As the traction of the longitudinal fibres is felt, especially posteriorly, where they are connected with the choroid, this must exert an injurious effect upon the posterior half of the eye, and it is on this account that the vision for distant objects should be corrected by proper glasses. Notwithstanding the denial of Dr. Ayres, and contrary to the general opinion, I believe that these two sets of fibres must act as antagonists, just as in the two fibres of the iris. Each set will develop with the demands made upon it. In the hypermetropic eye, where accommodation is constantly needed, the sphincter fibres become more abundant. In the myopic eye, where the lens is needed flat, the longitudinal ones predominate to such an extent in highly myopic eyes that very few circular fibres exist in them. This explains why myopic eyes, if any extra demand is made upon them, especially at the age when the lens has become hard and less elastic, are apt to suffer. The result of the constant tension of the suspensory ligament of the lens interferes with the nutrition of the lens itself, and therefore a posterior polar cataract is apt to develop. Even adhesion of the lens is more apt to occur in highly myopic eyes. Complications can, however, be avoided if proper glasses are used, especially if they were employed early in life. The improved facility to see distant objects without effort will help to prevent a further increase of the myopia, and I have been struck by the fact, which has never been sufficiently emphasized, that persons who have always been using proper glasses are rarely troubled by the serious complications of myopia. But, on the other hand, people who have never used glasses, especially those of the least cultivated class, who have unfortunately such a great prejudice against the use of them, are the ones who not only suffer from serious complications, but frequently lose their eyes altogether. If I succeed to-night in interesting the gentlemen present in this particular point, I shall consider myself richly paid for my trouble, as I know what a powerful influence your views have with your patients, who probably never dream of any difficulty from this point, and who never come near a specialist until it is too late.

I have collected as many as forty cases of patients who lost the vision of one or both eyes,—some entirely, others nearly so,—all on account of myopia which had never been treated by glasses or otherwise. I have seen, however, on the other hand, many cases of this affection, even of high degree, where glasses had been used constantly and early, and most of them had excellent vision in old age. A table of 40 cases of persons who had never used glasses, and of 40 cases of persons who had always used glasses, was shown. The first 40 cases were taken from his class at the eye and ear infirmary, the other from his private practice. The impairment of vision was considerably greater among those who had never used glasses. 12 eyes had become entirely useless of this class, and only 3 of the other class. Vitreous opacities were found in 13 of the first, 5 of the latter class; changes of the choroid occurred in 22 of the first, in 2 of the latter class; detachment of the retina in 6 of the first, none of the second class; changes in the macula lutea in 4 of the first, 1 of the latter class; posterior polar cataract in 4 of the first, 1 of the latter class; senile cataract in 4 of the first, 2 of the latter class; dislocation of the lens, 2 in the former, none in the latter. The history of a number of cases was given to illustrate this point.

In consequence of the connection of the circular fibres with the attachment of the iris, the action of the longitudinal fibres upon these results in the dilatation of the pupil. This explains why myopes, who are constantly making efforts of this kind, have wider pupils than emmetropes or hypermetropes. The latter, especially, have to accommodate constantly by means of the circular fibres, and this error of refraction is, therefore, frequently recognized by the smallness of the pupils. On account of the size of the pupil, which admits so much light, myopes are apt to suffer greatly from this source, especially if the light has many irritating rays. The irritation is not only an inconvenience, but is absolutely harmful. It will not only interfere with clear vision, but causes irritation and congestion of the inner tunics of the eye, and thus becomes a new factor in increasing the existing amount of myopia. The correction of this should, therefore, be a matter of great importance, especially in the earlier stages of myopia, when such patients are apt to complain about dazzling and the painful effect of bright lights. Even congestions of the lid and conjunctiva are by no means rare at this time. An illustrative case was given. In this case much of the benefit derived came from the slight blue color of the correcting glasses, which neutralized the orange-colored rays of the light, which possess such irritating properties.

Near-sighted persons have the advantage that they see small near bodies very clearly without effort of accommodation. This is the reason why they can do fine work for a long time, and why such eyes are looked

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CAFFEINE VALERIANATE, JALAPIN, ELAYLCHLORÜR,
DUBOISINE SULPH., THYMOL CRYST., BROMOFORM,
ESERINE SULPH., CODEINE, HYDRIODIC ACID,
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upon as very strong. But any object farther than the far point which has an intimate relation to the degree of near-sightedness is not seen distinctly, and the myope has to try constantly to improve his vision for such objects by relaxing his accommodation as completely as possible, and thus have his lens flattened by the action of the longitudinal fibres of the ciliary muscle. Long-continued efforts of this kind cause great pain and irritation of the eyes. An illustrative case was given, in which a young lady was essentially relieved by proper glasses for long and short distance, and a tonic medicine.

I should like to say a word of recommendation for the new mydriatic, hyoscin, which is made from hyoscyamin. One five-hundredth part of a grain of it will dilate the pupil and paralyze the accommodation in seven minutes. Its effects disappear wholly in about two or three days. For children, one-thousandth part of a grain should be applied to the conjunctival sac, as it is apt to cause alarming constitutional symptoms if given in larger doses. In fact, I prefer that young patients use homatropine, which, although not quite so powerful, is a much safer preparation. I have used hyoscin for more than a year very extensively, and find that it has the advantage over atropine that it acts more promptly, and that its effect is not so lasting.

There are some cases that are known as false myopia, depending upon a spasm of accommodation, and not upon a change of the eyeball. The circular fibres remain contracted, and the lens is allowed to retain a greater curvature, and parallel rays reaching the eye are focussed in front of the retina, just as in real myopia. This is the reason why such persons see better by the aid of concave glasses. This trouble is caused by great efforts of accommodation in young people under unfavorable conditions. The use of the ophthalmoscope or of a mydriatic makes the diagnosis easy. These are the only cases of myopia that can be cured.

In regard to the prevention of myopia, the changes which we have to guard against are the condition of the sclera, the avoidance of the compression of the eye by the external ocular muscles, and the avoidance of intraocular pressure, which is principally caused by long-continued accommodative efforts and fulness of the intraocular blood-vessels.

In regard to the first indication, we must remember that the sclera is most apt to yield at the age of six to sixteen, a time which, unfortunately, corresponds to school life, when the eyes are more taxed than at any other period of life. The danger is greater after debilitating diseases. Children should not be sent to school for at least six weeks after they have passed through one of the severer diseases of childhood. Those children in whom the hereditary predisposition to near-sightedness exists should be even more carefully watched.

The second danger, compression of the eye by the muscles, is only to be feared when the child is occupied with small near bodies which demand constant convergence. Such efforts will not only cause pressure, but will also interfere with the return flow of the blood through the vena vorticosa. Reading and writing, therefore, should not be continued too long at a time, as frequent repetition of it may change the shape of the eye permanently. Good light and good print are, therefore, very necessary for study; nor should children be allowed to remain in the same position for any length of time.

The third factor, the avoidance of intraocular pressure, is also of great importance. On this account, tight collars compressing the blood-vessels of the neck, leaning over of the head, studying before breakfast, are injurious. Long-continued accommodative efforts, and especially a spasm of accommodation, are apt to bring on congestion and fulness of these vessels. Constipation, and poor ventilation of school-rooms, will act in the same way. Out-door sports and the practice of distant vision are therefore to be encouraged. These rules are not only necessary to prevent near-sightedness, but are of the greatest importance after myopia has once developed, in order to prevent its increase. But more energetic efforts are called for if this affection is accompanied by great irritability of the eyes, which becomes manifest by a sensation of heat and fulness and pain in the region of the forehead, or in the eyeball itself, of lachrymation, of dread of light, and redness of the conjunctiva, as well as of the lids. In these cases, which are known as progressive myopia, complete rest of the eyes is necessary. This is best brought about by the use of atropine, whose effect is most lasting, and the employment of plain dark glasses. If these are not used, it will be necessary to keep the patient in a dark room during the atropine cure; but it is better to let him have as much out-door exercise as possible.

In regard to the selection of glasses, if any signs of irritability of the eye exist, these should be made of light-blue glass. If the work of the patient is such that it lies farther than the far point, weaker concave glasses must be ordered for this than for the infinite distance. Patients with a marked degree of myopia get along best with one glass for all distances. The use of the glass should be constant, and should be begun as early in life as possible. The glasses should be a little too weak rather than too strong. In some persons an abnormal preponderance of the external recti exists, which requires greater efforts of the internal recti at convergence. Correction by weak prismatic glasses should not be neglected, or division of the external recti

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may be called for. Great care is necessary in selecting glasses for the higher degrees of myopia, especially if their use is begun late in life. Such eyes are not in a condition to accommodate much, and the use of too strong a glass may lead to disturbance in the interior of the eye. If the lens is hard and inelastic, it is best not to give glasses at all for reading and writing, and for the distance full correction must likewise be avoided.

DISCUSSION.

Dr. WEBSTER said that Dr. Mittendorf's paper was so very complete an exposition of the views of modern ophthalmologists upon this subject that it seemed scarcely to admit of discussion. Dr. W. did not think Dr. M. had said anything that he could find any fault with, and, the paper being so complete in itself, he would not consume any time at this late hour in discussing it, but would tender the author his personal thanks for having brought the valuable paper before the Society.

Dr. POMEROY.—I can say, as Dr. Webster did, the hour is late, and the author has said about all there is to be said on the subject. I would like, however, to develop one or two points. I have not myself been in the habit of giving patients glasses to wear for distant objects or of advising them to wear them constantly. I tell them not to use their eyes all the time, but to save them as much as they can. Dr. Pomeroy also touched upon some other points; among others, some of the secondary changes which take place in the interior of the eye in myopic patients, etc. In the matter of treatment it is difficult to get the patient to observe instructions fully.

After the transaction of some business, the Society adjourned.

NEW YORK ACADEMY OF MEDICINE.

STATED MEETING, OCTOBER 5, 1882.

DR. FORDYCE BARKER, President, in the Chair.

THE scientific paper of the evening was read by Dr. E. G. JANEWAY, and was entitled "*Cases bearing on the Diagnosis and Localization of Cerebral Disease.*"

The author said it had been his intention to read a paper bearing on localization and its difficulties alone, but on looking over the literature of the subject he found it had been so carefully and thoroughly, and with such detail, treated of by others that he thought it better first to consider somewhat the subject of diagnosis of cerebral diseases from general diseases, and then relate some cases bearing on the question of localization.

Among the general diseases which most frequently presented difficulties of diagnosis from cerebral diseases were the fevers. First and foremost of these was typhus fever, on account of the marked cerebral symptoms attendant on it. The author knew of certain cases in which the death-certificate had been written alcoholismus, meningitis, encephalitis, etc., when it should have been written typhus fever. The delirium, the stupor, the change in the character of the pulse, and especially the stiffness of the back of the neck, often misled one to make a diagnosis of meningitis, etc., when scarlet fever was present. Illustrative cases were given. The duration of the disease, the surroundings of the patient, the presence or absence of the disease in others in the same neighborhood, etc., were the means by which a differential diagnosis was to be made. There was an affection which might very much resemble both disease of the brain and typhus fever from the fact of the participation of the brain in the process in many cases: that was, acute ulcerative endocarditis. The detachment of soft masses from the valves of the heart and passing into the arteries of the body gave rise to the symptoms which might lead to the diagnosis of brain disease or typhus fever.

Typhoid fever rarely passed under the form of cerebral disease, owing to its longer forming stage, and usually tympanitic abdomen and diarrhœa. The physician might, however, sometimes be misled when there was an absence of the eruption and of diarrhœa, etc., or suppose typhoid fever to be present when there was only a typhoid state in connection with tumor, meningitis, etc., if the full history was not obtainable. He had on several occasions found the muscles tender, etc., and examined for trichinæ; and in others he had to exclude the possibility of basilar meningitis with certain symptoms.

Malarial diseases, fortunately, were not often mistaken for cerebral disease, but the converse was not true. Tumors particularly were apt to be attended with cephalalgia, and he had known it to be as periodic as tertian. The earlier stages of cerebral abscess or a meningitis leading thereto might be attended by both headache and hectic fever, which might so simulate malaria as to make the diagnosis possible only after a careful survey of all the symptoms and the history. Some of the severer malarial attacks, such as occur in tropical climates, might cause coma, etc., and lead to the suspicion of cerebral disease.

Pneumonia and pleurisy had been in many instances mistaken for meningitis and cerebral disease, the former much more frequently than the latter or pleurisy.

Bright's disease of the kidneys, more especially the contracted type, in various ways tended to mislead the physician. There was frequent accompaniment of cerebral hemorrhage. One could not depend alone upon the presence or absence of albumen in making the diagnosis, but he must take into consideration the hypertrophy of the heart, endar-

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teritis, etc. Two very interesting cases were given in illustration, in one of which a lad 16 years of age was supposed from the symptoms present to have basilar meningitis, but at the autopsy there was found to be ventricular hemorrhage, hypertrophy of the left ventricle, and disease of the kidney. The age of the patient, however, it was supposed, excluded kidney disease.

The question of locating cerebral disease must ever be one of interest to the physician. He had seen several cases which seemed to have a sufficient amount of interest to justify him in reporting them. While the symptom —that is, paralysis or spasm—came from irritation of the cortex, or from pressure or destruction of the cortex, and not from that of the subjacent fibres, yet it was seldom limited entirely to the cortex; and since the white fibres were supposed to be simply conductors from the surface, injury to them might also be of some value in rendering such conduction impossible.

One of the best cases he ever saw bearing on the question of localization was that of a man who was able to say only two words,—*ja* and *nein*,—the German for "yes" and "no." There was no paralysis whatever; no symptoms except those of aphasia and agraphia, the latter less. He had received an injury at the inferior anterior part of the left parietal bone, at which place there was a depression sufficient to admit the end of the little finger. The location corresponded to the posterior part of the third frontal convolution. There was no improvement in aphasia during the two years he kept track of the patient, who was an intelligent man.

The next case was that of a man 47 years of age, who received an injury on the left temporal region. He fell and lay unconscious for ten minutes. Regaining consciousness, there was found to be considerable swelling at this part, but no wound; he could not speak; water flowed from his lips. There was no affection of the legs or arms, but there was paresis of the muscles of the right side of the tongue, and severe headache. He was unable to talk, and, while he could make letters, he did not place them in order in writing words. He knew the difference between the right and the wrong pronunciation of a word. The treatment consisted in quiet, cold, blisters to the back of the neck, laxatives, and iodide of potassium. He made a rapid recovery, and at the end of eight days was able to speak almost any word, but with considerable hesitation. At the end of six weeks headache, vertigo, the partial facial paralysis, and aphasia were almost completely recovered from.

The next case was that of a lad 13 years of age, who, previous to the development of symptoms, had struck his head against objects on several occasions. Two weeks after falling and striking his head on a curb-stone, he began to complain of severe headache, the left leg became a little weaker than the right one, the left arm was also a little affected, and before long there was, perhaps, a little squint in the left eye, but there was no proof of it afterwards. The headache continued, occurring three times a week, lasting most of the day. With these he would vomit what he ate. Involuntary starts also occurred in the arm, shoulder, and hand. After about four months sight began to fail, and in about six weeks he was almost totally blind. There were no convulsions, no affection of the bladder or bowels. The boy finally became completely hemiplegic, and three days before death he became partially comatose with fever. At the post-mortem examination a gliomatous tumor was found to occupy the site of the ascending central convolutions of both sides, projecting into the gyrus fornicatus, etc. Some softening, doubtless, accounted for the fever preceding death. The tumor involved white matter as well as gray.

In opposition to this, another case was related in which no definite paralysis occurred, although there was a tumor of about the same size as in the former case pressing upon the temporo-sphenoidal lobe. The tumor grew from the dura mater.

The next case was that of a man, 21 years of age, who, after a stroke on the head, had left hemiplegia; no rigidity. He became almost comatose. On the next day he had three convulsions, during which there was frothing at the mouth, and he bit the tongue. There was no paralysis of the face or tongue. Sensation on the affected side was blunted. Trephining was performed at the seat of the injury, over the frontal lobe. A small spot of suppurative pachymeningitis was found, an explorative hypodermic needle was introduced, if possible, to find pus; but none was found. Afterwards it was discovered that the pus was situated between the arachnoid and dura mater, held by the falx and the lobule. Beyond this, situated a little farther back than the first frontal convolution, was a small hemorrhage. They probably had entered that in exploring the brain, as one time they drew out a little black blood. This seemed not to have anything special to do with the motor phenomena. The whole surface of the membrane at the seat of the injury before mentioned was coated with pus and fibrinous exudation.

In one case, that of a man who had cirrhosis of the liver, there was paralysis of the sixth and ninth nerves on the left side. There occurred in that case what was said not to occur, namely, pachymeningitis hæmorrhagica, not to a great extent, but sufficient to affect those nerves. Two or three other cases were referred to.

DISCUSSION.

Dr. E. C. SEGUIN said it was somewhat dif-

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ficult to take up so extensive a paper as Dr. Janeway's, which touched upon so many points. It was to him a very instructive paper, —more particularly the first part of it, which dealt with the difficulty in diagnosis between general diseases which were accompanied by well-marked mental symptoms and ordinary cerebral diseases. He had seen a few such cases, and realized the extreme difficulty with which a conclusion was reached. More particularly had this difficulty been present in cases in which there was a combination of well-marked cerebral symptoms of renal degeneration, and he thought that in these cases it was sometimes impossible to avoid a double diagnosis. He also referred to a topic perhaps a little outside of the scope of Dr. Janeway's paper: that is, with reference to the diagnosis of conditions of the system which were accompanied by nervous symptoms from actual disease of the brain and its membranes. He referred to the large number of cases of indigestion, a consumption of too much of the carbonaceous foods, etc., producing certain nervous symptoms, as headache, loss of memory, affections of the eyesight, etc., or such symptoms in general as belonged to the lithæmic state. He would not detain the Academy in discussing the second part of the paper. It would seem Dr. Janeway had been led to a favorable consideration of the problem of localizing lesions in the brain, a doctrine which Dr. Seguin had been a supporter of. He had made several diagnoses based upon a firm belief in the new physiology of the brain.

Dr. J. C. DALTON, being requested by the President to make some remarks upon the subject from a physiological point of view, said he thought what we needed now was a discussion of the facts going to show the difficulties connected with referring particular functions to injury or destruction of certain parts of the brain. Coincidences going to show the supposed relationship between certain parts of the brain and given functions were being accumulated, but certainly many difficulties were met which might now well be pointed out. "When I recollect the great anticipations that were felt when this doctrine of cerebral localization first came up, when it was first started by Broca's doctrine in regard to the localization of the function of language, and afterwards strengthened by Hitzig's experiments with galvanism applied to the cerebral cortex, and the remarkable corroborations which followed from pathologists as well as experimental physiologists, who found that by destroying those very parts of the brain relating to particular muscular movements those muscles were paralyzed, it seemed as if a new era had begun in the study of the brain, and that all we had to do was to go on in that path and map out the brain, just as the old phrenologists mapped it out for another purpose. And the fact is, we did succeed in that way for a good many years, and I think that the anticipation myself is a just one. At the same time, difficulties began to show themselves, and those difficulties must not be ignored. We have a great many cases aside from physiological experiments: pathological cases, in which particular parts of the brain have been found after death to be diseased or destroyed, corresponding exactly with the experimental location of the functions in question.

"At the same time, I presume that all the pathologists present will agree with me in saying that there are cases, a great many of them, of an opposite character, where lesions of those parts were not accompanied with the symptoms that might be expected, and where the symptoms which had been observed during life were not found to be caused by apparent destruction or injury of those particular parts of the brain. Now, I do not imagine for a moment that there is any contradiction in physiological or pathological facts; they are only difficulties, and these difficulties will themselves, I have no doubt, be a source of a great deal more value than apparent positive information when we understand them. It appears to me, at the present stage of the matter, that these difficulty and contradictory cases are the ones we want to have discussed more than the favorable ones. The first trouble arose in the fact that the paralysis, which was first found to be produced uniformly on the opposite side of the body on cutting away a certain portion of the brain, was afterwards found not to be permanent. Several explanations of the difficulty had been offered. First of all, we may suppose other parts of the brain take up the function which was previously performed by the destroyed portion. That at first seems a pretty clumsy explanation, and I do not think myself it offers a satisfactory theory of brain-action. One of the most ingenious explanations of the recovery of sight in animals after it had been lost on cutting away the angular convolution in the back part of the brain was that offered by Munk. He says it is, I believe, soul-blindness: that the animal sees objects, but does not know what they mean; they do not suggest anything to its mind. He says that in the neighborhood of the gray cells which had been trained to take impressions of objects, but are now removed, there are other gray cells, which are capable of doing this, but have never yet done so, and they now gradually receive the intellectual impression of the object. Now, that, of course, is a very ingenious explanation, but still I think it is a little clumsy. I think that if a piece of meat were held before a dog, and he saw it, if he received any impression whatever that there was an object held before him, being naturally a very active, quick animal, he would give some indication of seeing it. Goltz, by a series of very carefully performed experi-

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ments on animals, was enabled to keep the animal alive a year after destroying three-fourths of the cerebral cortex. The result which he reached was that the assumption that particular districts of the brain are devoted to special functions is untenable. He says it is impossible to paralyze permanently a single muscle of the body by the destruction of any part of the cerebral cortex, and that equally it is impossible to believe that any circumscribed district of the cortex is exclusively devoted to the sense of sight, smell, hearing, taste, or touch."

Dr. BIRDSALL referred to a case which he had related before the Medical Section of the Academy, referring to the fact that several lesions might be found in different parts of the brain, but symptoms being present which, according to present localization, could be referred to only the one lesion. He also referred to some other cases, and spoke of the tumor in a given case simply pushing aside the brain-fibres, and not affecting them specially, as in the case of a tumor in the medulla oblongata, which must have produced serious symptoms had the nerve-fibres themselves been affected. Finally, however, death did result from symptoms which must be referred to the influence of this growth upon the functions of the nervous centres in its neighborhood. He thought it was a fact that certain of the nervous tracts were traversed more frequently than others, although we could not distinguish the fact by microscopical examination, and upon this was based the theory that when an obstruction existed in the course of the usually traversed tract, an unused or comparatively unused tract would gradually take on the function of the old. He referred to the theory of overlapping sensory layers, they probably also overlapping motor areas.

Dr. H. KNAPP, being requested to speak concerning the relation between brain-disease and eye-symptoms, said that choked disk or other optic symptoms could not be utilized much in cerebral localization. Almost any inflammatory process in the brain might involve parts connected with the optic tract sufficiently to give rise to these optic symptoms. We sometimes find cases where, under inflammatory symptoms, people get blind and deaf at the same time, and perhaps have gustatory disturbance and disturbance of other special senses which are examined less. He had seen cases of that kind with all the symptoms of a cranial tumor, in which the deafness disappeared, blindness disappeared from one eye, while the other remained perfectly blind, although choked disk had existed alike in both eyes and both disks appeared exactly alike afterwards.

The discussion was closed by Dr. JANEWAY, who referred to some other cases which had a less direct bearing in favor of localization.

The Academy then adjourned.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

STATED MEETING, THURSDAY, October 5, 1882.

The VICE-PRESIDENT, T. M. DRYSDALE, M.D., in the chair.

DR. W. GOODELL exhibited the specimens and gave the histories of the following cases:

RENAL CYST.

Mrs. C. M. G., aged 52, and married for twenty-eight years, has had three children, the youngest of whom is twenty-five years old. For many years she has had pain in the left renal region, and sharp attacks of gravel. This pain was so increased by jolting that she was unable to drive even in a carriage with double springs; but she has never experienced the excruciating pain of a stone passing down the ureter. Of this she is positive. Four years ago she began to enlarge, but she did not suspect a tumor. As her health grew worse, she came on from the West, and in last July consulted Dr. J. F. Bird about it. He recognized a cyst, and called Dr. Goodell in to see her. Despite her age, her catamenia were not only regular, but too free. Dr. Goodell expected to find a fibroid, but the womb measured only three inches, and it was also very movable, and wholly independent of a large cyst which filled up the abdomen like an eight-months fœtus. The lower edge of the cyst could be felt per vaginam lying in front of the womb. Percussion elicited all the phenomena peculiar to ovarian cysts. Coronal resonance was marked. There was dulness in front, showing the complete absence of intestines from that region, their presence being alleged to be one of the most trustworthy signs of a renal cyst. As the lady stated positively that there were changes in the size of the tumor, Dr. Goodell was disposed to regard it more as a cyst of the broad ligament than as one of the ovary.

The operation was performed on September 16. As soon as the cyst was reached, it was ascertained that it was not ovarian or parovarian, but it was fully fifteen minutes before its true character was discovered. The cyst was covered with a very vascular but loose layer of peritoneum, to which, in the lateral regions, the intestines were attached, and in which they seemed to be embedded. This was cut open and stripped off from the whole cyst, which now revealed on its lower border an expanded and healthy portion of the left kidney. To confirm the diagnosis, a small calculus was found within the cyst, and a much-distended ureter discovered. The pedicle formed by this process of enucleation consisted, below the ligature with which it was secured, of the

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renal blood-vessels enveloped in connective tissue. But to get a button of tissue sufficient to prevent all slipping of the ligature, the operator was obliged to leave on its distal side a small portion of the cyst, but none of healthy kidney.

It was evidently a case of hydronephrosis, but the uterine sound was passed into the ureter and no obstacle was met with: it probably did not reach the bladder. This ureter was brought out at the lower angle of the wound, and secured there by one of the sutures. Nineteen days have now elapsed since the operation, and the lady has done uniformly well, and sat up to-day for the first time.

HYDATID OF MORGAGNI.

The lady from whom this specimen was taken was operated on by Dr. Goodell, on September 4, and promptly recovered. The cyst was of the left ovary, but the right one, being also diseased, was removed. Attached to one of the fimbriæ of the oviduct is a very beautiful specimen of a hydatid of Morgagni. This little body, so often found attached to the ovary, was of interest, because those small cysts of the abdomen, which, after obtaining a small size, would burst and usually refill, were, in Dr. Goodell's opinion, cysts of this hydatid.

CYST OF THE PAROVARIUM.

This specimen was taken from a young woman, aged 22. The tumor was first noticed eight years ago. Dr. Goodell aspirated her before the clinic at the University of Pennsylvania in October, 1880, and November, 1881. On each occasion a perfectly limpid fluid was removed, and the diagnosis was consequently made of cyst of the broad ligament. As the cyst again refilled, she demanded its removal, and she was accordingly operated on before a ward-class, on September 19. The cyst sprang from the left side, and had the usual delicate and vascular wall. Spread out on its lower border is the corresponding ovary, which could be very readily overlooked by a careless observer. The right ovary, being much enlarged and filled with small cysts, was also extirpated. When first removed, it contained a fine corpus luteum, but the alcohol had dissolved this out, leaving merely the deep pit which held it. The operation was performed just two weeks after her last monthly period. The usual metro-staxis occurred on the fifth day after the operation. The patient is convalescing well.

PAPILLOMATOUS UTERINE GROWTHS AND METRORRHAGIA.

Dr. W. H. PARISH exhibited two apparently similar growths removed from the endometria of two patients, one of which he considered benign, the other malignant. In the first case menstruation had ceased for a year, after which it had returned and become constant and profuse. She had suffered from prolapse following labor twelve or fifteen years ago. Dr. Parish dilated the uterus with two sets of sponge tents, after which he introduced his finger and found a number of elevations as large as a pea. Some of these he removed by means of curettes, and others by seizing them by forceps and twisting them off. Some metritis followed the operation, but no blood has been lost in the last four weeks.

The second specimen was removed from a carcinomatous uterus, by means of the curette and the écraseur.

Dr. GOODELL remarked that he did not allow the revelations of the microscope to govern him in his treatment of bleeding from the uterus. He had under his care recently three such cases, all of which were reported by noted microscopists to be carcinomatous, but one of these cases was entirely cured by local measures.

One case of lacerated cervix with ectropium and free hemorrhage, pronounced undoubtedly cancerous by a microscopist of high repute, was relieved by scraping and cured by operation. Another case, pronounced cylindrical epithelioma by the same gentleman, recovered after operation.

A patient of Dr. C., while in this city, was referred to him for examination as to the cause of persistent menorrhagia. Ether was given, and a careful and thorough examination made, and the round and sharp curettes were used, but Dr. Goodell could find no cause except a few minute granulations. This class of cases is usually found among stout or plethoric women, and the hemorrhage will recur after any treatment, although temporary benefit can be obtained. When the curette is passed over the walls of the uterus it exercises a tonic effect, and a contraction results, checking the hemorrhage.

Dr. A. H. SMITH stated that he had had under treatment a number of cases of marked anteflexion, generally in young girls, in whom dysmenorrhœa is followed by very profuse menorrhagia, which proves very exhausting and will not yield to internal remedies. Examination shows no recognizable cause, but a stem-pessary will secure entire relief in a few months. He has seen six such cases within the last three years. He has had under treatment cases resembling epithelioma of the uterus in which the introduction of a large sponge tent has resulted in complete cure, and secured the cessation of profuse and hitherto uncontrollable hemorrhage.

Dr. PARISH remarked that some cases of incurable hemorrhage are due to inflammatory adhesions of the uterus to surrounding tissues, which will disturb the circulation and modify nerve-action. He considers the smooth wire

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curette a valuable aid in diagnosticating the condition of the endometrium, as its passage over the uterine wall will distinguish between healthy and unhealthy uterine tissue.

A patient suffering from uterine hemorrhage for three weeks following a possible miscarriage at three months was cured by one application of the smooth curette, which brought away some granular matter.

REVIEWS AND BOOK NOTICES.

THE ETIOLOGY, PATHOLOGY, AND TREATMENT OF BALDNESS AND GRAYNESS. By TOM ROBINSON, M.D., etc. London, 1882. Pp. 44, 8vo, cloth.

This well-written and handsomely-printed *brochure* is of especial interest for those who are anxious to postpone the more salient evidences of the sere and yellow leaf period of life as late as possible. Calvities and canities are herein discussed historically, etiologically, clinically, and therapeutically, in a style at once elegant and edifying; the recommendations for treatment being judicious and well advised. It is a book that both patient and physician may read with pleasure and profit; but more particularly is this true when the physician is himself the patient, which is not unusual with these disorders.

A COMPLETE PRONOUNCING GAZETTEER, OR GEOGRAPHICAL DICTIONARY OF THE WORLD. New Edition, Thoroughly Revised and Greatly Enlarged. Philadelphia, J. B. Lippincott & Co., 1882.

It is curious how feeding a want makes it grow. A few years since, there was no such book as the one before us; but it came, met a want more or less clearly recognized before, and to-day no private library can be considered complete, no school decently furnished, without this gigantic octavo. In it one hundred and twenty-five thousand localities are described with all necessary detail. Who can remember a tithe of this information? Who can do without it? The great geographical instructors of to-day, or, perhaps we might more correctly say, the great geographical inciters, are the newspapers. To-morrow the telegraph may electrify us with the statement that the Russians have advanced to Tschao-Naiman-Sume-Khotan, and Europe, threatened with consulsive throes of war, together with America, eager in its sympathy, must at breakfast hold its breath until it can look in the Gazetteer and find that the town of name unpronounceable is a Mongolian city, one hundred and sixty-five miles northwest of Pekin. Or a Star Route contractor hails from Jesuit's Bend; and, lo! to the Gazetteer go a host of patriots, eager for the blood or incarceration of the defrauder. Or some one in studying where best he can locate himself to manufacture flour consults the Gazetteer, and with a sigh reads that there is a grist-mill twenty miles north of Abington, and with sadness forever turns from the contemplation of Russell County, Virginia. Such is an epitome of life, and it were an easy task to prove that this great Gazetteer, peerless and alone among books, is a necessity alike to the "school-marm," the cultured dilettante, the man of enterprise, and the mere reader of newspapers. Let, then, such of our readers as have not decided what gift at Christmastide they shall upon their wedded spouse bestow, send at once an order for this book, in which the world condensed doth lie.

THE INCIDENTAL EFFECTS OF DRUGS. A PHARMACOLOGICAL AND CLINICAL HAND-BOOK. By DR. L. LEWIN, Assistant at the Pharmaceutical Institute of the University of Berlin. Translated by W. T. Alexander, M.D. New York, William Wood & Co., 1882.

Every dog has his day, and, while we as a body have been undermining the popular trust in the healthfulness of water, air, and food, showing, by chemical analysis and the microscope, that we are all drinking sewage, breathing bacteria, and eating abominations of every sort, the author has turned the tables and gone very far towards undermining our own old childlike trust in good medicines. This he does by showing how horrible may be their incidental effects. Of course, in a general way, the information is not new. We know that there exist in the community certain unrecognized, and probably unrecognizable, persons to whom a grain of calomel is a poison, who have intractable coryza from iodide of potassium, or asthma from ipecac; who lie in wait for the innocent and unsuspicious doctor, and fiendishly up and die when he gives them a grain of opium, or turn black with a safe dose of nitrate of silver, and more fiendishly live. But in this book we find them all described, coming upon us with the power that combination gives, to make our days uneasy and our nights distressed.

Who now will feel the holy calm that was wont to follow the exhibition of pepsin and bismuth? for the bismuth may meet an acid in the stomach and prove a deadly irritant in the economy. And the number of remedies capable of giving unexpected trouble is very great,—so great that we cannot, in limited space, enumerate them, and dare not, lest we render the reader timid and cause him to pause irresolute over his next prescription. The author, however, has not only indicated the evil effects to be recognized, but strives, by enlightening us as to their causes, to lead us towards their prevention, and we recommend a perusal of this book to all readers who desire to be safe practitioners.—E. W. W.

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GLEANINGS FROM EXCHANGES.

THE PRACTICE OF MEDICINE IN CHINA.—Dr. William Young, now of Toronto, but lately a resident in Hong-Kong, China, contributes an interesting paper to the *Canada Medical Record*, in which he describes the native medical practice:

"The Chinese physician largely practises counter-irritation. A favorite method, which is commonly adopted in rheumatism and inflammatory pains, is for the doctor to close his fist firmly, and, using the index and middle fingers as forceps, to seize the skin over the part, draw it forcibly outward, letting it free with a snap into its place. It is quite common to see coolies, that is, the working classes (whose bodies are usually uncovered), with long, dark, bruised lines on their persons, caused by this barbarous system of torture. A more painful, though not so common, method is the application of moxa, often causing large and gangrenous wounds by the application of fire near important and sensitive organs. But the favorite application to all parts is an adhesive plaster. It is a matter of sublime indifference to a Chinese practitioner whether the patient is suffering from an abscess or a wound, an abrasion or merely a numbness from cold; the same plaster is applied. It matters not whether the wound be recent or of long standing, or whether it be clean or foul with corruption; the same disgusting materials are applied. If, in spite of such treatment, a cure is effected, the praise of the remedy is vaunted abroad; but if, as is usually the case, bad becomes worse, they assume that some evil influence has been at work to counteract the efficacy of the drug. . . .

"One of the most melancholy chapters of Chinese medicine is the superstitious and idolatrous practices connected with guarding the sick from the destructive spirit of disease. This is accomplished by various incantations, and by the exhibition, on the bed and walls of the room, of hideous pictures to frighten away the genii of evil. Sometimes the patient's face is painted in the most grotesque manner, in fantastic shapes and colors, giving the whole scene, were not the life and health of the patient at stake, a most ludicrous aspect.

"The choice of a physician is also decided by lot, and not from any well-known skill or ability of the doctor, or, if the patient or friends decide upon a certain practitioner, they endeavor to find evidence that their selection has been fortunate. The Chinese are, however, in all these matters, thoroughly practical. The physician undertakes to cure for so much and within a certain time, and should the first dose of the medicine not produce the desired effect, the oracle is again consulted, and another physician is again called in. The moment, however, a Chinese doctor perceives that the patient is sinking, he at once abandons the case, leaving the poor sufferer to linger without aid, or do anything to smooth the way of the last and closing scene. This moment is the opportunity of Western physicians, often, however, too late to be of any use to the sufferer. The Chinese have a thorough contempt for their doctor unless they are certain he is doing them good or he succeeds in gaining their implicit confidence by bold and reckless assertion. His nostrums are invariably looked upon with suspicion, for even in the much-vaunted Tung Wah Hospital, of Hong-Kong, which is under the management of native doctors, on a settle behind the building may be seen ranged under the name of the patient or number of his bed duplicates of the medicine given or the exhausted matrix of decoctions, so that, should the patient die with symptoms not understood, the medicine or detritus may be examined, to see that it contained no deleterious or poisonous ingredients.

"Happily for the Chinese, nearly all their medicines are inert, as pearls, tigers' bones, rhinoceros-horns, fossil bones, and numerous other articles as inert are used, which are absolutely without any medicinal virtue. Were it otherwise, it would require no gift of prophecy to predict that the whole land would soon be a graveyard, and its teeming cities would be turned into desolation. Of obstetrics as a science they are entirely ignorant, wearying and exhausting the patient by absurd and ridiculous positions, often risking the mother's life by giving her disgusting draughts, and at last abandoning the case, rendering many a home desolate or marring the maternal prospects, when the most elementary knowledge of the subject would have overcome all difficulties and saved the life of one or both. In this department, also, prejudice is fast breaking down, and in cases of difficulty a European surgeon will be sent for. It is then, when they see how simply, and without exposure, the case is dealt with, that their admiration for the foreign doctor is shown, and they make no scruple to speak of their own in terms far from complimentary."

HYPODERMIC APPLICATION OF PURGATIVES.—After L. Lewin and Kohn had published a number of observations concerning the action of certain purgatives if employed by the hypodermic method, A. Hillier, of Berlin, made some experiments which he reported last month in the *Zeitschr. f. Kl. Med.* The remedy mostly recommended for this purpose is *aloïn*. Hillier observed, after injecting 0.15 to 0.2 grams of the remedy, a copious and soft discharge within four to six hours. But the action depends much upon the preparation of the remedy. *Colocynthinum purum* produced, in the dose of five to ten mgrm., watery stools with slight bellyache. A solution is made with water, glycerin, and alcohol, but the injection is very painful. Just as painful are the injections made by a similar

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solutionof *citrullin*, dose 0.005 to 0.01. The same can be said of *acidum cathartinicum* (made from senna), dose 0.2 to 0.3. We may conclude, therefore, that these injections produce too much pain, while aloïn, which does not cause this inconvenience, is very unreliable.—*Medical Press and Circular.*

THE consumption of opium in China is very great, and probably increasing, but, to the dismay of the English, who desire to supply the drug from the India fields, the Chinese are raising poppies more and more. The English consul at Ichang, China, states in a recent report the result of a careful inquiry into the question of the respective yields of a crop of wheat and a crop of opium. The result of the investigation went to show that the opium poppy yielded at least twice as much to the cultivator as wheat. Calculated in English quantities, an acre of opium will produce what is worth one hundred and fifty-three shillings, whereas an acre of wheat will give at best only seventy-five shillings. To the value of the drug itself twenty shillings has to be added for the oil-capsules and other products, which, however, may be set against the extra labor required from opium-producers and the extra manure. Other estimates put the yield of both opium and wheat lower, but the proportion is the same; and in districts remote from market towns, or in hilly country, the advantage of opium over grain is much greater, because it costs so much less to take to market. No wonder, then, that the production of the drug is increasing. The poppy is grown now on all sorts of land in China, on hill-slopes, terraced fields, and paddy and bottom lands. As recently as 1872, when Baron Richthofen reported on the cultivation of the drug, it was grown only on the hill-lands.—*The American.*

MISCELLANY.

MEDICAL BURSARIES.—A considerable number of bursaries have been founded for the aid of medical students during the last few years in Great Britain, and a lady has just presented to the university at Aberdeen the sum of two thousand pounds, the income of which is to be divided among four students who shall be prosecuting their studies in Aberdeen University with the view of entering the medical profession. The *British Medical Journal*, in commenting upon this, says that, while there is no lack of bursaries in the study of divinity, it has been long felt that medical study was but poorly provided for. It is to be hoped that the good example thus set will be followed by others, not only in Europe but in America: it is one well worth copying in this country, where experimental research and original investigation badly need such substantial encouragement.

The Thirtieth Annual Meeting of the American Pharmaceutical Association was held at Niagara Falls on the 12th of September and the succeeding three days. The meeting was large and successful. President R. N. Bedford opened the meeting with an address, which contained an interesting sketch of the history of the Association. The following officers were elected for the ensuing year:

President.—Charles A. Heinitsh, of Lancaster, Pennsylvania.

1st Vice-President.—John Ingalls, of Macon, Georgia.

2d Vice-President.—Louis Dohme, of Baltimore.

3d Vice-President.—William B. Blanding, of Providence.

Treasurer.—Charles A. Tufts, of Dover, New Hampshire.

Permanent Secretary.—John M. Maisch, of Philadelphia.

Reporter on Progress of Pharmacy.—C. Lewis Diehl, of Louisville.

Members of Council.—Samuel A. D. Sheppard, of Boston; William Saunders, of London, Ontario; W. S. Thompson, of Washington, D.C.

The next meeting will be held in Washington, D.C., commencing on the second Tuesday in September, 1883.

AN officer of the Pennsylvania Railroad Company is represented as saying that experiments recently made with coke as fuel for locomotives, with a view to abating the smoke-nuisance, had been entirely satisfactory.

THE Third Annual Meeting of the Board of Trustees of the Norristown Insane Asylum was held October 6. The old officers were re-elected for another year. The total number of patients remaining under treatment was nine hundred and fifty.

THE Seventh Annual Meeting of the Association of Medical Officers of American Institutions for Idiotic and Feeble-Minded Persons was held at Elwyn on October 3 and the two succeeding days. The programme contained a number of interesting papers.

DEATH IN A DENTIST'S CHAIR FROM CHLOROFORM.—A lady living in Dunnville, Ontario, died in a dentist's chair on September 11, while under the influence of chloroform, which had been administered by her physician for the purpose of having some teeth extracted.—*Medical Record.*

THE corner-stone of a new charity hospital in this city, to be known as the St. Agnes Hospital, was laid October 9, with appropriate ceremonies, by Archbishop Wood. It is situated at Broad and Mifflin Streets, and will have four hundred beds.

MEDICAL INSPECTOR B. F. GIBBS, U.S.N., died September 9, at Trieste. He entered the navy in 1856.

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POISONING OF A CHILD BY ALCOHOL.—A little girl, three years of age, died in this city on the 10th instant from the effects of drinking the contents of a bottle of whisky.

DR. BENJAMIN P. HOWELL, one of the oldest physicians in West Jersey, died at Woodbury on the 9th instant, aged about 70 years. He was the owner of Howell's Cove fishery, and was one of the State Fish Commissioners.

THE College of Physicians and Surgeons, Chicago, was opened formally on September 28. The building is not quite finished, but there were said to be one hundred and five matriculants at the time of opening. Where the students are, there will be medical colleges also.

IODOFORM.—AT the meeting of the American Pharmaceutical Association, Mr. George Sloan, of Indianapolis, remarked that he had found thymol to cover and disguise the smell of iodoform to a greater degree than any other substance tried by him.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY FROM SEPTEMBER 30 TO OCTOBER 14, 1882.

WOODWARD, J. J., MAJOR AND SURGEON.—Leave of absence extended four months on account of sickness. S. O. 233, A. G. O., October 6, 1882.

WATERS, W. E., SURGEON.—Ordered to Madison Barracks, N.Y., for duty as post-surgeon. S. O. 178, Department of the East, October 5, 1882.

WILLIAMS, JOHN W., MAJOR AND SURGEON.—Now on leave of absence, to proceed to San Francisco, Cal., and report in person to the Commanding General, Military Division of the Pacific, for duty in Department of the Columbia. S. O. 228, A. G. O., September 30, 1882.

WATERS, WM. E., MAJOR AND SURGEON.—To report in person to the Commanding General, Department of the East, for assignment to duty. S. O. 228, A. G. O., September 30, 1882.

IRWIN, B. J. D., MAJOR AND SURGEON.—On being relieved as attending surgeon, headquarters of the Military Division of the Missouri, to proceed to Whipple Barracks, Arizona, and report in person for duty as Medical Director, headquarters of the Department of Arizona. S. O. 228, A. G. O., September 30, 1882.

FORWOOD, WM. H., MAJOR AND SURGEON.—Relieved from duty in Department of the Platte, and to report in person to the Commanding General, Military Division of the Missouri, for duty as attending surgeon at those headquarters. S. O. 228, A. G. O., September 30, 1882.

SMITH, ANDREW K., MAJOR AND SURGEON.—Relieved from duty in Department of Arizona, and, on expiration of present sick leave, to report by letter to the Surgeon-General. S. O. 228, A. G. O., September 30, 1882.

CALDWELL, D. G., CAPTAIN AND ASSISTANT-SURGEON.—Granted leave of absence for one month, with permission to apply for an extension of three months. S. O. 105, Department of the Platte, October 3, 1882.

BURTON, H. G., CAPTAIN AND ASSISTANT-SURGEON.—Granted leave of absence for four months. S. O. 229, A. G. O., October 2, 1882.

LORING, LEONARD Y., CAPTAIN AND ASSISTANT-SURGEON.—To be relieved from duty in the Department of the Missouri, to report in person to the Commanding General, Department of the East, for assignment to duty. S. O. 228, A. G. O., September 30, 1882.

SKINNER, JOHN O., CAPTAIN AND ASSISTANT-SURGEON.—To be relieved from duty in Department of Arizona, and to report in person to the Surgeon-General. S. O. 228, A. G. O., September 30, 1882.

MOSELEY, E. B., CAPTAIN AND ASSISTANT-SURGEON.—To report in person to the Commanding General, Department of the East, for assignment to duty. S. O. 228, A. G. O., September 30, 1882.

TURRILL, HENRY S., CAPTAIN AND ASSISTANT-SURGEON.—To be relieved from duty in Department of the East, and to report in person to the Commanding General, Department of the Platte, for assignment to duty. S. O. 228, A. G. O., September 30, 1882.

SHUFELDT, R. W., CAPTAIN AND ASSISTANT-SURGEON.—To proceed to Jackson Barracks, New Orleans, La., and report to the Commanding Officer thereat for duty. S. O. 93, Department of the South, September 26, 1882.

CRAMPTON, LOUIS W., CAPTAIN AND ASSISTANT-SURGEON.—To be relieved from duty in Department of Dakota, and to report in person to Commanding General, Department of the East, for assignment. S. O. 237, A. G. O., October 11, 1882.

BARNETT, RICHARDS, CAPTAIN AND ASSISTANT-SURGEON.—Relieved from duty in Department of the Platte, and to report in person to Commanding General, Department of the East, for assignment. S. O. 237, A. G. O., October 11, 1882.

MCCREERY, GEORGE, ASSISTANT-SURGEON.—To report in person to the Superintendent of the Mounted Recruiting Service, Jefferson Barracks, Mo., to conduct a detachment of recruits to the Department of Arizona. On completion of that duty, to rejoin his station in that department. S. O. 233, A. G. O., October 6, 1882.

BIRMINGHAM, H. P., ASSISTANT-SURGEON.—To proceed to Fort Bayard, New Mexico, when relieved at Fort Elliott, Texas, and report to the Commanding Officer for duty. S. O. 198, Department of the Missouri, October 3, 1882.

EWEN, CLARENCE, ASSISTANT-SURGEON.—Relieved from duty at Fort Elliott, Texas, to proceed to Fort Gibson, I.T., and report to the Commanding Officer at that post for duty. S. O. 198, Department of the Missouri, October 3, 1882.

OWEN, WM. O., JR., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—To proceed to Fort Townsend, W.T., and report to the Commanding Officer for temporary duty at that post. S. O. 138, Department of the Columbia, September 22, 1882.

POWELL, J. L., ASSISTANT-SURGEON.—Relieved from duty at Fort Stockton, Texas, and to report at headquarters of the Department of Texas for temporary duty as post-surgeon, San Antonio, Texas, and attending surgeon at department headquarters. S. O. 103, Department of Texas, September 29, 1882.

CARTER, W. F., ASSISTANT-SURGEON.—Relieved from duty at Fort Concho, Texas, and to report to the Commanding Officer, Fort Stockton, Texas, for temporary duty as post-surgeon. S. O. 103, Department of Texas, September 29, 1882.

KANE, JOHN J., ASSISTANT-SURGEON.—Granted leave of absence for one month, with permission to apply for extension of three months. S. O. 202, Department of the Missouri, October 9, 1882.

WAKEMAN, W. J., ASSISTANT-SURGEON.—Upon being relieved at Fort Douglas, U.T., to proceed to Fort Fred. Steele, W.T., and report for duty. S. O. 106, Department of the Platte, October 6, 1882.

BRECHEMIN, LOUIS, ASSISTANT-SURGEON.—Relieved from duty in Department of Dakota, and to report in person to Commanding General, Department of the East, for assignment. S. O. 237, A. G. O., October 11, 1882.

GRAY, W. W., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—To be relieved from duty in Department of the Columbia, and to report in person to Commanding General, Department of the South, for assignment. S. O. 237, A. G. O., October 11, 1882.

WAKEMAN, W. J., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Upon being relieved at Fort Douglas, U.T., to proceed to Fort Fred. Steele, W.T., and report to the Commanding Officer at that post for duty in the absence of Assistant-Surgeon D. G. Caldwell, on leave of absence. S. O. 106, Department of the Platte, October 6, 1882.

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PHILADELPHIA, NOVEMBER 4, 1882.

ORIGINAL COMMUNICATIONS.

THE MANAGEMENT OF ABNORMAL OBSTETRICAL PRESENTATIONS.

Read before the Philadelphia County Medical Society, September 27, 1882.

BY WILLIAM T. TAYLOR, M.D.

WRITERS on midwifery differ as to what constitute *abnormal* presentations, some considering *all vertex* presentations as *normal*, others only those which terminate favorably, saying that if the relative proportions between the child's head and the pelvic cavity are correct, they will require no manual or instrumental assistance to conduct them safely to the end; and, as the majority of children are born head-foremost, this is certainly the most natural presentation, for then the head descends regularly into the pelvis and terminates by the uterine efforts within twenty-four hours, with perfect safety to the mother and child. But others say that if the labor is prolonged in the first or second stage, so as to exhaust the mother or risk the life of the babe, then they should be considered *abnormal;* and such is the case with many *occipito-posterior* presentations, for the occiput is compelled to traverse the whole extent of the anterior face of the sacrum, coccyx, and perineum, from seven to eight inches, before it can emerge from the vulva, instead of from two to two and a half inches, before it comes under the arch of the pubes, as in the *occipito anterior* position.

Our worthy ex-President, Dr. Albert H. Smith, says, "These are the vastly most numerous cases of delayed dilatation, requiring careful management, and most satisfactory in their results if fully understood."

As the *occipito-posterior* presentations are classed among the malpositions of the child, and often cause tedious and difficult labor, and a prolonged first stage is a bad preparation for any accidental complication of a second; although no evil may result from delay, yet we are bound to remove the cause, if we can safely do so, and save the mother unnecessary pain, which we can often do by changing the presentation with the hand.

This change was advocated by Baudelocque, Dewees, Hodge, Meigs, and other obstetricians to expedite slow and tedious labors, and Dr. Dewees said that "a physician was incompetent to practise midwifery in its best manner who could not detect and change this malposition of the head, and thus abridge by several hours the misery and pain of his patient."

It is important that these presentations should be diagnosed in the early stage of labor; and this can be done, even before the os is dilated or the membranes ruptured, by noticing a peculiarity in the shape and position of the os uteri, which was described by an English accoucheur* many years since: "it consists in a depression of the posterior lip of the os uteri and an elevation of the anterior lip, dependent on the position of the child's head. In ordinary labor the child's head is, at the commencement of the labor, flexed upon its body; but during its progress the head becomes still more flexed by the chin approaching still nearer to the sternum. The result of this is that the posterior half of the child's head is much lower than the anterior. Consequently, in the occipito-anterior presentations, the occiput being in front presses upon the anterior lip of the os uteri, and depresses it much below the level of the posterior lip. But in occipito-posterior presentations the reverse takes place: the occiput, being behind, depresses the posterior below the anterior lip. At the same time the posterior lip, and even the entire os, are unusually low in the pelvis."

The plan which I have adopted, and advocated for several years, in these occipito-posterior presentations (I will quote from a former paper which I read before this Society in 1877), is gradually to introduce my fingers, until I can insinuate my whole hand into the womb, when the os is sufficiently dilated, and, having grasped the head, to turn it from a fourth to a second, or from a fifth to a first position, —*i.e.*, from the sacro-iliac junction to the right or left acetabulum, which can generally be easily performed before it enters the pelvic cavity. This turn occupies but a small arc of a circle, and, if the head is born and the body has not changed its position, the slight twist of the neck will

* J. G. Swayne, M D., of Bristol, England. Provincial Medical and Surgical Journal, February 18, 1852.

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produce no injury, for a return of the head to the original position will occur before the body is born. It is sometimes necessary to keep the head in the altered position with the hand, until the forceps can be applied. The head, however, will not revert to its former position if the body also is turned, which can be accomplished without much difficulty by the hand. For if the hand is used carefully and intelligently, it will "work wonders" in all obstetrical operations, and with a little experience you will soon acquire the *tactus eruditus*, and will not grope blindly when obliged to use the forceps or other obstetrical instruments.

Dr. Dewees, who advocated this change of a "forehead front" into an "occiput front," said "that even in a pelvis contracted 'antero-posteriorly' we may assist the woman to deliver herself by applying two or three fingers to the side of the head so as to carry the vertex towards the acetabulum." In fact, he *recommended* this change where it was practicable, and the late Professors Hodge and Meigs seconded his views.

When, however, the head is jammed down in the pelvis, we must place the woman in the "knee and elbow" position of Dr. Thomas, and endeavor to push it above the narrow part, which can thus be accomplished most readily, for, the fundus being lower than the os, the child gravitates somewhat towards it, and the expulsive pains are less, and sometimes cease entirely.

If, however, we cannot alter the presentation, and the labor is protracted too long, no advance being made by the head, or the mother is exhausted, we must deliver with the forceps, being careful to remove them when the head has passed through the inferior strait, so as to protect the perineum, which is in greater danger of being torn than when the occiput is front.

Face presentations occur, according to Dr. Thomas, once in two hundred and fifty labors, and are caused by some obliquity of the uterus, or a pelvic contraction, which presses the child's head backwards, and the chin departs from the breast.

If the chin is at the pubes and above the brim, it can be changed to an occiput posterior by pushing it towards the breast; then it can be turned anteriorly (as before described), when the labor will proceed naturally. But if the chin is below the pubic arch, a long time will be required before the occiput can move along the sacral curve, and the pressure may cause the death of the child, unless delivery is effected by the forceps.

When the chin is turned towards the sacrum, if we can push it up early, so that the occiput comes down anteriorly, we will have no trouble; but if the chin is below the promontory of the sacrum, and the forehead front, it should be left to nature as long as possible, assisting, however, to turn with the hand or vectis, for as the labor proceeds the head will generally turn in the pelvic cavity, with the face forward, and at the outlet the upper lip will be fixed against the symphysis, whilst the occiput will roll over the perineum; then at last the mouth and chin will emerge from under the symphysis.

If, however, no advance is made by the expulsive pains, the forceps must be used to turn the chin forward, as thus described by Smellie: "After applying the forceps along the ears, push the head as high up in the pelvis as is possible, after which the chin is to be turned from the os sacrum to either os ischium, and afterward brought down to the inferior part of the last-mentioned bone. This done, the operator must pull the forceps with one hand, while two fingers of the other are fixed on the lower part of the chin or under jaw to keep the face in the middle, and prevent the chin from being detained at the os ischium as it comes along, and in this manner move the chin round with the forceps and the above fingers till brought under the pubes, which done, the head will easily be extracted."

If the child is dead, craniotomy may be required.

Dr. Barnes, of London, says that in cases of due relation of pelvis and child, birth with the chin posteriorly is almost impossible; for in proportion as the face descends, there is a rapidly widening base of a wedge formed by the occiput bent back upon the child's trunk, which cannot pass the pelvis; but that turning and delivering by the feet is the best course, yet if the head is low it may be difficult to accomplish.

That it is difficult is unquestionable; but if the hand can be introduced alongside of the head to reach the feet, the

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head itself might be turned to a more favorable position.

In these cases Dr. Isaac E. Taylor, of New York, suggests the division of the perineum laterally, on whichever side the chin presents, before craniotomy is performed; but I doubt its benefit,—for the chin is not generally arrested by the perineum; and if the child is dead, why inflict unnecessary pain on the mother?

The next abnormal presentation to which I will refer is the *shoulder*, in which the *back* of the child will be either towards the abdomen or the back of the mother. In dorso-anterior positions the right shoulder will be felt if the head is in the left iliac region, and the left shoulder will present if the head is in the right iliac. But in dorso-posterior positions the left shoulder will be lower in the pelvis, if the child's head is in the left iliac fossa; and the right shoulder will present if the head is in the right iliac region.

We are all aware of the fact that, unless the child is small, it is impossible for the shoulder and head to pass together through the pelvis, and therefore delivery can only be effected by the head or breech singly.

For many years the latter was considered the only proper mode, especially before the forceps were known in midwifery; as the accoucheur could then assist by taking hold of the feet and legs. Some even now prefer podalic to cephalic version; but by bringing down the head we can deliver with the forceps if necessary.

It is an established fact that in shoulder presentations nature has sometimes effected delivery by spontaneous version, terminating it by a breech or foot presentation; but it generally requires so much time that the child perishes during the act. Now, if we can expedite the labor, and give the child a chance for its life, it is our duty to do so; and that we can do by *cephalic* version.

The plan which is considered the best, and which is generally practised, was first suggested by Dr. Wright, of Cincinnati, about 1850.

The patient should be placed so that her hips will be higher than her shoulders, inclining towards the side upon which the head of the child lies, so that the breech will gravitate towards the fundus of the uterus on the same side, and thus assist to draw the child away from the brim of the pelvis.

The right or left hand is to be used in the vagina or uterus as is most convenient, according to the position of the head. When the child's head is in the left iliac region, we should use the right hand, and with the fingers push the shoulder towards the right side of the pelvis, whilst with the left hand we press down the fundus in the opposite direction. This will generally cause the shoulder to move to the right, and the head will occupy *its* place in the pelvic cavity.

When, however, the fœtal head lies on the right side of the ilium, the fingers of the left hand should be used against the shoulder, whilst the right hand is used on the outside of the abdomen, placing the patient in a position similar to that described, but on the right side.

By this mode version is generally effected quite easily. If, however, we cannot cause rotation, we must bring down the feet and deliver by the breech.

The rule to be adopted in *breech* presentations is "masterly inactivity," to sit patiently beside the patient and encourage her during the first stage of labor, allowing the os to dilate until the expulsive pains begin, when, by pressing down the fundus of the uterus towards the os by a kind of *vis-a-tergo* force, we can assist the smaller end of the fœtal wedge to dilate the os gradually, and also keep the chin of the child firmly fixed on its breast. As the body advances and the umbilicus appears, we should pull down the cord slightly, to remove it from pressure; if its pulsations are strong, wait for nature to act; but if they are very weak, we must assist the expulsive pains by drawing down the body. When the chest is born, if the arms are near the body they can be brought down quite easily; but if they are alongside of the child's head we must pass one or two fingers over the shoulder to the elbow, gradually drawing the arm over the face and chest until it is delivered, beginning with the one next to the perineum. As the head passes through the inferior strait, if the pulsations of the umbilicus are yet strong we can wait for the expulsive pains; but if the cord beats feebly we must hasten the labor by placing two fingers on the upper lip or one on each side of the nose, and press firmly down, so as to keep the chin towards the breast, whilst we pull the body towards the symphysis pubis; if it does not advance speedily we must use the

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forceps, for delay at this time will often sacrifice the child.

The most favorable presentation is when the back of the child is anterior, so that the occiput shall come down under the pubic arch; although when it is posterior the head will often turn in the pelvic cavity, and be born with the occiput front.

A presentation of *the feet* should be managed like that of the breech, the rule being to let them alone until pressure on the funis obliges us to act as before described. If one foot is in the vagina, and no advance is made, we should search for the other, and, having brought it down alongside of its fellow, wait awhile for pains, applying, however, a downward pressure on the fundus to stimulate uterine action.

Prolapse of the funis, when it occurred, was frequently the cause of death to the child, until the postural treatment of Dr. Thomas was adopted as described by him in 1858. It consists in placing the patient on her elbows and knees, with the face and chest resting on the bed, so that the fundus of the uterus shall be lower than the os; then, by introducing the hand into the vagina, we can with the fingers easily press the descending loop into the os, and above the side of the descending head, or other presenting part, into the dependent uterine cavity.

Presentations of the *head* and *funis* or *arm* and *funis* can be rectified by placing the patient in the knee and elbow position, and pushing up the head or arm from the brim, when the funis will easily slip back, or can be pushed into the uterus, so that the head can descend alone.

If the *hand* and *foot* are presenting, we must bring down the foot and deliver as in footling presentations.

Placenta prævia is generally recognized during the latter part of utero-gestation by the patient having a hemorrhage after some exertion, or even when quiet: this may occur periodically, at the menstrual epochs, and may cause premature labor.

On examination per vaginam, if the os is beginning to dilate, a soft spongy substance will be felt within, and we recognize the placenta. With each pain, as the os dilates, there is a flow of blood, and if this continues it will exhaust the mother and destroy the child: so that we must arrest it if possible. We should pack the vagina firmly, up to the os, with strips of soft muslin, linen or silk, tow or sponge, to prevent any oozing, and wait beside the patient for the pains to dilate the os, and to be ready for any emergency. In from half an hour to an hour, according to the pains and condition of the patient, we should remove the tampon, and if the os is sufficiently dilated to introduce the finger, it should be passed between the placenta and the uterine wall, and swept around as far up as it can reach, so as to separate the attachment. This will temporarily check the bleeding; but when it returns, tampon again and wait for further dilatation. When the plug is again removed, sweep the finger around again, within the os, as far up as it can reach, and if the edge of the placenta is felt and we can reach the "bag of waters," it should be ruptured, for then labor will proceed in earnest, and the expulsive pains will bring down the presenting part of the child, which should be hastened by every means in our power,—by pressing down the fundus, stimulating the uterus with ergot, and delivering as rapidly as is consistent with the safety of the mother and child.

If the presentation is a *partial placenta prævia*, and we can detach it from one side of the uterus so as to rupture the membranes and bring down the child to the os, the hemorrhage will cease, and the delivery need not be hastened so much, for the circulation between the mother and babe may be kept up, so that its vitality will be preserved somewhat longer.

In all obstetric operations, when the patient was very nervous, uncontrollable, or required an anæsthetic, I have given ether to inhale alone, or with the addition of a small quantity of chloroform when the ether was too slow in producing its effect. I have also used with much satisfaction the mixture of the Medico-Chirurgical Society of London, containing one part of alcohol, two of chloroform, and three of sulphuric ether, which causes anæsthesia in a shorter time and requires smaller doses for inhalation than ether alone.

Now, in conclusion, permit me to say that although I have not detailed minutely all the varieties of abnormal presentation, yet I have given some of the modes by which such cases are managed, knowing full well that a free discussion may bring out the experience of others, who will give clearer

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views on this subject than I have been able to furnish.

1324 North Fifteenth Street.

THE TREATMENT OF GLEET BY ELECTRICITY.

BY WILLIAM R. D. BLACKWOOD, M.D.,
Neurologist and Electro-Therapeutist to the Presbyterian Hospital, Physician to St. Mary's Hospital.

THE use of electricity in any form would not readily suggest itself to the general practitioner in the treatment of urethritis, acute or chronic, simple or specific. From accessible reports on the management of gleet, I am inclined to believe that gentlemen who devote special attention to diseases of the genito-urinary organs have not availed themselves of this agent or experimented with it. In order to verify my opinion on this matter, I have, during the last two years, by personal inquiry, learned that not a single case has ever been subjected to electrical treatment by any one of one hundred physicians whom I have interviewed on this subject. Further, in looking over nineteen works on medical electricity in my library, I find that only once is mention made of the use of the current in urethral discharges,* two cases of gonorrhœa being referred to, and a passing allusion only with reference to gleet.

Curiously, the value of galvanism in overcoming strictures otherwise impassable without cutting or forcible divulsion is recognized by several of these authors, and in a large number of these cases (in fact, the majority of them) the origin of the stenosis thus overcome by electricity was due to repeated gonorrhœas and associated with gleet. It is true, however, in these cases, that few sittings were made in overcoming the strictures, and therefore not much effect was noticeable by the surgeon on the urethral discharge. I must confess to a want of enthusiasm in research (if I may so term it) myself, because during many years past it has been my habit to notice the effect of electrical treatment on the general health, and its reflex action when employed for a definite purpose on other and distant parts of the body. For instance, in all cases of intercostal neuralgia, and in applications near the mammary region in women, I have kept note of any reflex action on the uterus or ovaries, such as, for example, an increase or decrease in the menstrual flow, and the converse, when treating dysmenorrhœa,—what effect, if any, did treatment have on the lacteal glands? Repeatedly I have proved to the satisfaction of myself and the patient that turgescence of the mammæ followed faradization of the womb or ovaries, and, inversely, that the *molimen menstruale* was both hastened and increased when treating pleurodynia or some other disorder of the antero-thorax. I have treated now a large number of cases of genital defect, particularly spermatorrhœa, impotence, and irritable prostate, by electricity, and yet I never thought of experimenting on the gonorrhœas of these patients or their friends, although they were frequently available, until the subject was thrust on me by pure accident. One of my professional friends, who has, unfortunately, too little confidence in himself in the way of minor surgery, especially of the genito-urinary organs, has many a time sent me patients troubled with stricture, either spasmodic or an old case irritated by some cause. In all these instances I have wasted no time, and troubled the person as little as possible by poking a multitude of bougies or catheters into him, but if, after trying gently a few sizes, I do not get into the bladder, I invariably insert an insulated urethral electrode, and pass a current of five or ten milliveberst through the constricting obstacle, with the effect of softening it down in a short time, and gaining my object with the minimum trouble to both of us.

In one case, a stranger to me, who was a martyr to a gleet which worried the life almost out of him and his washerwoman, who (good and unusually innocent soul) could neither efface the lemon-colored stains from his linen nor account for their mysterious presence, the patient told me, after submitting to some half a dozen sittings, that his gleet was better than it had been for a year past, and inquired whether the electricity had anything to do with this unlooked-for and gratifying result. It did not strike me at the moment that it might, and I expressed my belief that the resolution of the stricture was the cause of his improved condition. After some time, however, he returned, stating that from indiscretion the gleet had been to some extent re-established, and he proposed elec-

* Medical and Surgical Electricity. Beard and Rockwell, 1st ed., p. 660. New York, Wm. Wood & Co., 1871.

† Fifteen to twenty Daniell's; but frequently five to eight cells will do.

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trical treatment rather than again undergo the tedious and inefficient course which had taken place before I got him under my care. As no harm could result beyond a little delay, I agreed to his proposition, and, to the gratification of both him and myself (not to mention the washerwoman, who was once more despairing), he did get rid of his gleet; and from that time forward I tried electricity in every case I could get hold of. I have treated during five years past nearly two hundred different patients, and in almost every one of them more or less experiment has been made as to the prospective or actual value of galvanism and faradism in such cases. The result of this investigation has been exceedingly gratifying to me, and the percentage of success, due undoubtedly to the particular treatment employed, has been such as to warrant me in saying that in no other method has the patient been more promptly or more radically cured. This is saying a good deal; but I mean it fully. Gleet is a tough and unsatisfactory customer to handle, and, although plenty of cures exist on paper, and lots of confiding students listen to the words of wisdom as they drop from the mouths of their professors in the winter course and their auxiliary teachers in the summer months, they find, when in actual practice, that somehow or other their patients do not improve under these prescriptions, and that gleet once established generally sticks, and the most provoking part of the trouble is that the heartier is the general stamina of their patient the more obdurate is his infirmity to any and all measures.

For some years past the belief that gleet nearly always depends on stricture has been asserted by prominent authorities, and this more particularly by Otis, of New York. A number of ingenious instruments for the gradual or rapid dilatation or divulsion of stricture have been produced, and without doubt they accomplish their purpose, but at the cost of considerable suffering, and confinement of the patient to his bed for some days, and restriction from following his business for at least a week or more. Now, the same result can be reached, with less manual trouble to the physician and much less physical trouble to the patient, by electrolysis. The proceeding is neither difficult nor painful; anæsthesia is never requisite, and within my own experience, or so far as I can learn from others who have employed this method of operating, no ulterior bad result has ever followed it. There may be strictures impassable by insulated bougies, yet none of them have been encountered by myself. With this much concerning stricture, which is not so much a digression as might be thought, the main point is reached.

The treatment of gleet by electricity is based upon a procedure essentially like that of stricture. The requisites are a galvanic battery of fifteen to twenty cells of any constant form, such as the zinc-carbon, of Grenet or Léclanche type, the Daniell, or the Smee, a good faradic coil, several urethral bougies well insulated to the tip, a rectal electrode, and a sponge-holder. A *water* rheostat is a valuable addition, as by it we can readily intercalate any needed resistance without shock, and nicely graduate the current to its proper strength. The patient is placed in a horizontal position on a lounge or operating-chair, the genital organs, abdomen, and thighs exposed, and the galvanic battery placed to the left of the operator. A moderate-sized bougie is slightly oiled, and passed on into the bladder if the canal is pervious, or to the stricture if one exists. To the urethral electrode is attached the negative, and to the sponge-holder the positive pole of the battery. The sponge should be well wetted with salt water, and applied over the bladder or on either thigh, it matters little which. The current is now turned on slowly until plainly but painlessly felt by the patient. If no stricture exists, the bougie is slowly withdrawn until it approaches the glans, when it is again pushed towards the bladder. Under this manœuvre, here and there some little uneasiness, or even pain, is elicited, and at such points the inflamed urethra is probably bare of epithelium, and it is there that the pus or muco-purulent discharge is manufactured. The limits of this painful area being determined, the electrical application is confined to that part alone, and the intensity is graduated to an easily bearable point. From fifteen to thirty minutes is an ordinary séance, and this should be repeated daily, or, better still, if circumstances admit, twice daily. Should stricture prevent access to the bladder at once, gentle but firm and continuous pressure is made by the bougie, with as strong a current flowing as the patient can stand, and in a few minutes usually the stricture will yield,

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even though it be gristly and tortuous. In such cases it will of course be necessary to employ small bougies, on the same principle followed in ordinary management; but, as before stated, I have so far not failed to pass any stricture ultimately, although I did not succeed in several instances at the first sitting, and sometimes not until the third.

Notwithstanding the difficulty of penetrating the constricting band, the gleety discharge has, as a rule, been notably decreased by the operation in the cases just referred to, and in several tight strictures I have purposely made the electrical applications to the proximal end of the band for a considerable length of time without pushing the electrode beyond it. Despite the fact that the stenosis still existed, the gleet became less in such cases, proving to my mind the value of constant currents on inflamed surfaces, particularly of mucous character. I also believe that most, if not all, of the discharge in stricture cases originates just in front of the constriction, because I have often had the secretion to cease for a considerable time by treating the gleet without pushing the electrode onward to the bladder. In cases where the gleet is deeply seated, or where we encounter enlarged prostate, the rectal electrode is preferable for the anode to a sponge handle as before described. The instrument should be insulated around the shoulder or part which is grasped by the sphincter ani, as in many persons this part of the bowel is especially sensitive. Before introduction, the electrode should be oiled, and after its insertion the distal end should be directed towards the anterior face of the rectum, for currents being more or less diffused laterally are not only unpleasant if they traverse the sacral plexus, but the extra strength required, unless the two electrodes are nearly approximated, renders the urethral intensity too great for comfort. This may appear a small point; but little niceties tell in electrical applications, and all currents should be not only easily bearable, but without any discomfort, and this rule holds good in all practice, with a very few exceptions. To further this, the rectal electrode should be not the common ball, an inch or more in diameter, as usually found, but a conical rod four inches long, from which the flow escapes over a large surface. The urethra is not much more sensitive than the rectum, but the reason why currents easily borne by the bowel are painful in the former is because they are concentrated at a small point, and in the operation under consideration a more or less caustic action is induced by strong currents at the cathode, the alkalies being set free at that pole. The moist condition of the urethra favors this action, for, other things being equal, tissues which contain the most water yield more readily to electrolysis than the dryer portions of the body. In conjoined rectal and urethral electrization the sitting need not be so long as in the method first described, because the effect desired is more directly attained. From five to ten minutes will suffice.

After getting rid of all discharge, it is a good plan to employ faradism for a few times, as it seems to tone up the relaxed mucous membrane. I suppose any mild astringent injection would answer the purpose equally well, but, having in all cases treated solely by galvanism used the induction coil with perfect satisfaction, I have adopted a routine plan thus far. In many old cases, more or less lumbago and ill-determined pain in the region of either kidney is encountered, and nothing drives this away so quickly and permanently as faradism. The usual plan is to apply the positive to the lumbar spine, and make labile application to the whole abdomen, back, and sides. Pretty strong currents are used, but the pressure should be light, and undue contraction of the muscles, especially the rectus abdominis, should be avoided.

During the entire treatment no medicine is administered, except, of course, to regulate the bowel if constipation presents; and even then the induced current, with massage of the abdomen, is better than drugs in those patients who will carefully comply with the instructions necessary for systematic manipulation of the abdominal muscles. Some people are too lazy to use a rapidly-performed sponge-bath of the abdomen and follow it by a few minutes' kneading. They prefer Seidlitz mixture or a mineral water, although permanent good results are attained by the mechanical treatment, and temporary relief only through the ordinary drugging. Diuretics are not necessary in any case, and all injections must be stopped during the electrical treatment. The diet must be carefully regulated, especially with reference to alcoholic

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stimulants, which are to be rigidly tabooed. The belief that gin is a valuable remedy in bladder and kidney disorders leads many patients to take it on the sly, unless the physician is alert, and I am satisfied that a multitude of gleety discharges are kept alive because the doctor does not rigidly control his cases, and not through any fault in the medicines administered.

Relapses in gonorrhœa and gleet are quite common, and I have found this to occur with patients treated by electricity in about the same proportion as obtains with other methods. In such cases inquiry generally elicits a history of excesses in both diet and sexual intercourse. Men who have been kept total abstainers for some weeks are apt to overdo such matters at first, which is probably natural. Under a recurrent discharge, the treatment must be renewed as in a new case, and a few applications only will usually be needed to quiet the storm, and thereafter sensible men will observe moderation.

I am experimenting on a few female cases which, although they may not be strictly classed as gleet, have been at least kept up, if not originated, by relations with men thus affected. To my mind a goodly number of inveterate so-called leucorrhœas are of this nature, and they are very difficult to cure under any plan. The large surface and the hidden folds of the vaginal lining afford lurking-places for enough irritating mucus or muco-pus to prevent total relief, except with unusually careful patients, who are willing to take the trouble of thorough cleaning at least half a dozen times daily. The vagina is with difficulty reached in its whole extent by electricity, and the plan most satisfactory to me as yet is to distend it fully with salt water, which is retained by a shield or plug surrounding an electrode an inch in diameter and six inches long in its uninsulated portion. Double quantity of current is necessary to overcome the resistance of the water thus employed.

246 North Twentieth Street.

The use of the bicycle and tricycle has become quite the rage among prominent doctors in England, and the wheel is gaining some advocates here. Dr. A. W. Blythe gives a very interesting lecture in the *Boston Medical and Surgical Journal* on "Cycling," which deserves attention from those who practise in a level country.

VIRULENCE OF NORMAL HUMAN SALIVA.

BY GEORGE M. STERNBERG,

Surgeon U.S.A.

I should be sorry to dose the readers of the *Medical Times* with saliva *ad nauseam;* but, having additional experimental data to record, I have thought it best to publish at once, while the subject is still fresh in the minds of the readers of this journal from a perusal of Dr. Claxton's paper* and my own.†

Moreover, the facts relating to the infectious disease of rabbits, resulting from the introduction into their bodies of a parasitic micro-organism found in normal human saliva, have so important a bearing upon the general question of the etiology of infectious diseases that I think it very desirable that their force and import should be fully appreciated by the profession.

Before proceeding, I beg leave to call attention to the innovation in my previous paper with reference to the name of this infectious disease. I have always spoken of it as a "fatal form of *septicæmia*," and so wrote the word wherever it occurs in the paper referred to. It has been changed, however, by the proof-reader to *septæmia*, which is perhaps a better word, and which I am quite ready to accept upon the authority of the editor of this journal. But it seems to me that this word would be more properly used as applied to a non-infectious septic toxæmia, resulting from the absorption of the chemical products of putrefaction, leaving the word *septicæmia* as the distinguishing appellation of those infectious diseases which result from the multiplication of parasitic micro-organisms within the body of infected animals,—*e.g.*, anthrax septicæmia of the mouse,‡ fowl-cholera,§ etc.

I leave this question with the editor, and shall be pleased to be guided in my future use of these terms by his authoritative decision.

In my previous paper I related a series of experiments commenced July 6, to which I must refer the reader as properly introducing the following:

The culture-fluid (No. 6) used in *Experiment No. 3* (July 26) was laid aside in an hermetically-sealed culture-flask until September 12, when a minute drop was used

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* Times, June 17. † *Ibid.*, September 9.
‡ Koch. § Pasteur.

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to inoculate sterilized *bouillon* in culture-tube No. 7. This, placed in a culture-oven at 100° Fahr. for twenty-four hours, became clouded, and upon microscopical examination proved to be pervaded with the identical micrococcus heretofore described and photographed.* A drop of culture No. 7 was used to inoculate culture No. 8, and the next day, this being also pervaded by the micrococcus, was used in the following experiment:

Experiment No. 4.—September 14: Injected ten minims of culture No. 8 into a full-grown rabbit. *Result:* This animal died at 9 A.M., September 15, and a microscopical examination made at once demonstrated the presence of the micrococcus in great numbers in the blood and in effused serum in the subcutaneous connective tissue. The usual diffuse cellulitis, extending from the point of inoculation, was present; spleen small, and contained no pigment.

Remarks.—This experiment shows that the micrococcus retained its vitality and its full virulence at the end of six weeks, and, very conclusively, that the virulence of the culture-fluid is due to the presence in it of the micrococcus, and not to a hypothetical chemical virus found in the first instance in the saliva and subsequently in the blood of a rabbit inoculated with this fluid. For the benefit of those who have not calculated the degree of dilution which such a hypothetical chemical virus would undergo in such a series of culture-experiments, I submit the following simple calculation:

My culture-tubes contain about a fluid-drachm of sterilized *bouillon*. The amount of blood introduced into culture No. 1, as seed, was considerably less than a minim, but for convenience I will suppose that one minim is used each time to start a new culture,—that is, the original material is diluted 60 times in the first culture, 3600 times in the second, 216,000 times in the third, and in the eighth culture it will be present in the proportion of one part in 1,679,611,600,000,000. Yet a few minims of this eighth culture possess all the virulence of the first.

Look at it from another point of view. The few minims of culture-fluid introduced beneath the skin of a rabbit contain a micrococcus presenting definite morphological characters. The blood of the animal which falls a victim to experimental inoculation with this fluid is filled within forty-eight hours with the same micro-organism in numbers far exceeding the normal histological elements,—red and white corpuscles; yet some very conservative physicians still claim that the invading parasite is without import, a mere epi-phenomenon, while the infinitesimal portion of a hypothetical chemical virus is credited with this malignant potency. Truly, such a belief requires a faith equal to that of a conscientious homœopath. By the way, what will become of homœopathy if the germ theory becomes firmly established, and all infectious diseases are shown to be due to parasitic micro-organisms? If the main end of therapeutics is to kill germs, the doctrine of *similia similibus* can scarcely control the medical practice of the future.

To convince those who still question the etiological rôle of the micrococcus in the infectious disease of rabbits at present under consideration, it would hardly be worth while to carry our culture experiments further, as has been done by Pasteur and other pioneers in this field of investigation,—*e.g.*, in anthrax and in fowl-cholera. I therefore turn to another line of proof.

I have fixed very definitely the thermal death-point of this septic micrococcus. *It is killed by exposure for ten minutes to a temperature of 140° Fahr.* It survives exposure to 130° for the same time. This is the result of a considerable number of experiments, and is established by the simple method of exposing a culture-fluid containing the micrococcus, and enclosed in a hermetically-sealed tube, to a given temperature for the time adopted as a standard,—ten minutes,—and then using the fluid to inoculate sterilized *bouillon* in another tube. This, being placed in a culture-oven for twenty-four hours, remains transparent and unchanged if the *seed* has been killed, but is clouded and pervaded by the micrococcus if its vitality was not destroyed.

In my first series of experiments† I found that boiling destroys the virulence of blood from a septicæmic rabbit. Having now fixed with precision the thermal death-point of the micrococcus, the next step was evidently to see whether this temperature also destroys the virulence of the fluid containing it.

* *Vide* Studies from Biological Laboratory, Johns Hopkins University, vol. ii., No. 2, p. 194, and heliotype plate in vol. ii., No 3, p. 410.

† *Loc. cit.*

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To test this matter, the following experiment was made with the second culture from the blood of the rabbit which died September 15, as above reported.

Experiment No. 5.—September 7: Injected ten minims of culture No. 2 beneath the skin of a small spotted rabbit, also ten minims of the same culture-fluid beneath the skin of a small white rabbit of the same litter. *Result:* The small spotted rabbit was found to be dying the following morning at eight o'clock. It was killed by breaking up the medulla, and the blood from the heart examined immediately. This contained the micrococcus in abundance, as did also a quantity of serum contained in the pleural cavity and effused serum in the subcutaneous connective tissue.

The small white rabbit, injected at the same time with the same culture-fluid *heated to 140° for ten minutes*, did not seem to experience the slightest ill effect from this injection, and to-day (September 24) remains in apparent good health; that is, *the virulence of the culture-fluid used in this experiment was destroyed by the exact temperature which I had previously determined to be fatal to the vitality of the micrococcus.*

PLICA POLONICA.

BY FERDINAND LESSING, M.D.

ANNA T., æt. 16, went six weeks ago to the country with a lady friend, and, rambling about in the woods, they came to a cold spring, and washed their feet in it. Next day A. felt chilly and languid, appetite impaired, together with shooting pains through her limbs. A week after, she noticed that when combing her hair she could not pull the comb through as readily as heretofore, and by about a week more her hair was a matted mass. The symptoms of pains in her limbs had increased in proportion, as also a neuralgic pain in head and eyeballs. Two weeks before her death I was called, and found the sufferer in the following condition: She cried from the excruciating pain in limbs and head, the former being in a continuous state of tremor. Extremities cold, tongue clean, pulse 65, appetite gone, insomnia complete, and menstrual function stopped. I ordered her potassium bromide and chloral, also a tonic consisting of quinia sulph., iron, nux vomica, and arsenic. Gave her also wine and milk-punch *ad libitum*. The trembling of her limbs, as also the pain in head and eyes, had somewhat improved under this treatment in the course of a few days, yet her pulse grew weaker, and on the thirteenth day from the beginning she quietly passed away.

I give only a short synopsis of this peculiar disease, which I have so far found only among the Poles, which class is largely represented here. The treatment of the plica itself is, I believe, up to this day, not a settled one. Some authorities advocate the removal at once, others caution strongly against it. As regards the cutting, these people will never allow it. They state that it will either kill or cause blindness; and in this case the family referred me to a case in the country who got blind owing to the removal. The theory that the disease is the result of filthy habit I cannot uphold. This case convinced me otherwise. The hairs exude a gelatinous matter and get actually painful to the touch. It seems that they act as an emunctory, to rid the system of a dyscrasia. Those who get well will not cut off their hair until the new growth has well advanced, for which process they claim about a year's time.

I report this case, hoping to elicit the experience and opinion of some other members of the profession, as it will certainly come under the notice of those who have practice among the Poles, Bohemians, Lithuanians, and Russians.

WINONA, MINN.

TRANSLATIONS.

PARTIAL (JACKSONIAN) EPILEPSY—COINCIDENCE OF HEMISPASM WITH MOTOR HEMIPLEGIA, AND ITS DIAGNOSTIC VALUE.—Dr. W. F. Raymond recently presented at the Hôtel-Dieu (*Le Progrès Médical*, No. 38), an interesting case of partial epilepsy in a young girl 24 years of age, who appeared to be in perfect health. Upon speaking, however, it was observed that her responses were distinct, though rather slow and scanning; if she tried to speak faster, she stammered slightly; but there was no paralysis of the tongue or fibrillary trembling. There was almost complete immobility of the right half of the face. There was also marked, but not absolute, loss of power in the right arm, with moderate rigidity. On raising the arm, she could only maintain it extended for a very brief period, and during this time there was decided tremor of the forearm. There was no disturbance of sensibility. The right leg was less affected than the arm, though it exhibited the same features in a less degree. The tendon and cutaneous

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reflexes were preserved and scarcely exaggerated. The sphincters were not affected. No hysterical symptoms were present. The menses were regular. Syphilis was excluded.

The patient stated that she had been in excellent health, except that she had not menstruated up to the age of nineteen, when she felt weak and was obliged to give up a position as seamstress, the work being too fatiguing. She had never been nervous. Six months after this she had an apoplectic attack on rising in the morning, losing consciousness for about five hours, after which she was completely aphasic and had right hemiplegia. At the end of twelve days she began to regain a few words, and her speech thereafter gradually returned, and she also regained the use of her limbs, so that in two months she was able to walk. She also said that about one month after her attack she had sudden clonic spasmodic movements on the right side, lasting from four to five minutes. During the whole of this period she remained perfectly conscious, but powerless. Subsequently these convulsive attacks recurred without regularity, coming on after slight causes, or from no apparent cause. They were almost always preceded by an aura and a feeling of stupor, but she did not lose consciousness, and never had the epileptic cry, any disorder of intellection, or any of the usual attendants of ordinary epilepsy. After the apoplectic attack, the menses appeared and continued regularly afterwards; the spasmodic attacks had no relation whatever to the menstrual period.

Locating the lesion in the left hemisphere in the motor region of the cortex (the fronto-parietal convolutions), and stating his opinion that it had been followed by degeneration extending from the third frontal convolution along the anterior portion of the internal capsule into the medulla and the right lateral column of the cord, the lecturer proceeded to discuss the pathology of partial epilepsy, and the character of the lesion. The diagnosis, after exclusion of cerebral tumor, meningeal hemorrhage, pachymeningitis, cerebral extravasation, was finally pronounced to be that of local softening, but whether dependent upon thrombosis or embolism was not decided. The prognosis was favorable up to a certain extent, but entire recovery was not looked for. Iodide of potassium was ordered, and, as soon as signs of irritation subsided, the induced electrical current should be used. Jackson and Müller lay down the following differential signs between symptomatic and so-called idiopathic epilepsy:

1. In partial epilepsy there is no cry; the patient is conscious at the beginning of the attack, or throughout the entire proceeding if it is limited to one-half of the body.

2. In partial epilepsy the attack, with rare exceptions, is scarcely at all made up of *clonic* movements; but contraction, ordinarily very prolonged, commences in the same muscle and in the same muscular group. "The more the spasm begins suddenly, the more it commences to extend rapidly, the more the degree which it attains will be great, and the more the duration of the access will be short; and reciprocally." [The words in the original communication of Hughlings Jackson, as found in the official report, are, "The more suddenly the spasm sets in and the more rapidly it begins to spread, the greater range does the convulsion ultimately attain, and the sooner over is the paroxysm. On the contrary, when the spasm starts deliberately and spreads slowly, it is more likely to be limited in range, say merely limited to one arm, and to be lengthy."—Tr.*]

3. Paralytic and oculo-papillary phenomena are very common in partial epilepsy.

4. After the limited convulsive attack there remains usually a paralysis, sometimes temporary, sometimes permanent.

5. If the attack becomes general, the paralysis occurs on the side where the convulsions have been the strongest and the side where they have persisted the longest.

In these cases the local epilepsy points to a localized cerebral lesion. It was also remarked that in paralysis of cortical origin, the hemiplegia may completely resemble hemiplegia of central origin,—so completely, in fact, that the secondary descending degeneration sometimes follows, as in the present case; but secondary degeneration does not occur when the cortical lesion is situated outside of the motor zone.

Iodoform in the After-Treatment of Operations upon the Mouth.—Wölfler reports in the *Archiv für Klin. Chirurgie*

* International Medical Congress of London, 1882.

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seventeen operations for removal of cancerous tongue. None terminated fatally: on the contrary, in many there were no signs of inflammatory reaction. In all the after-treatment or dressing was by iodoform gauze. The following is the method of preparing this material at Billroth's clinic: Six metres of gauze is rolled up and dipped in a mixture of glycerin (60 grms.) and in an alcoholic (1200 grms. of 94°) solution of colophony (100 grms.), and then pressed out, and while in a half-damp condition it is dusted with iodoform (about 50 grms.) and dried. The gauze is then cut into strips of two or three finger-breadths, which are then to be packed into the wound, though without exerting too much force. The superficial layers of this only are changed as they become soiled, and new pieces of gauze put in their place for six or eight days; after this the dressing will fall out of itself. In all this time no other cleansing of the mouth is necessary; but efficient drainage should be provided by counter-opening, or a drainage-tube be used for a few days. Pneumonia or septic symptoms were not observed in any of the cases treated in this way.

Effects of Cold upon Trichinæ.—At the Société de Biologie of Paris, M. Paul Gibier recently presented, in the name of Prof. Bouley and himself, the results of some experiments undertaken by them in order to determine the results of cold upon the vitality of trichinæ contained in American hams. The existence and vitality of the trichinæ were first ascertained by the microscope, by chemical agents, and by physiological experiment upon birds, which, after eating the meat, were found to contain in the intestines, and to discharge in their excrements, large numbers of trichinæ. The same meat was then exposed to cold in a freezing-apparatus. The examination of the frozen meat demonstrated that all the trichinæ which they contained were dead, the means taken to ascertain this being the same that had already been employed to determine their vitality. The authors conclude that the temperature of 0° C. (32° F.) is very injurious, if not fatal, to trichinæ. After several weeks the frozen meat did not undergo any subsequent alteration: so that the cold does not destroy the effects of the salt and the smoke.

The same effects have been previously observed by Messrs. Livon, Bouisson, and Caillol de Poncy, in experimenting with cold upon trichinæ. "It appears to have been demonstrated that science possesses in refrigeration a powerful agent for rendering trichinosed meat wholesome, and that it affords to public hygiene a method which should be made serviceable in the treatment of trichinosed meat."—*Le Progrès Médical*, No. 27.

Poisonous Mushrooms.—The researches of Ponfick (*Virchow's Archiv*, June, 1882) prove that all mushrooms contain a poisonous principle, the activity of which is greatly influenced by accidental conditions. In the preparation for eating he recommends treatment with boiling water, the water being rejected, this to be repeated several times, by which means the toxic principle is easily eliminated. It is said not to be present in dried mushrooms. —*Revue Méditale.*

Subcutaneous Injections of Iodoform in Syphilis.—A solution of iodoform (6 pts.) in glycerin (20 pts.), of which from 30 to 75 centigrammes are used (gradually increasing) each time, is recommended by E. Thoman for hypodermic injection in intense syphilis. After six to twelve injections he always noticed a great amelioration in the symptoms.—*Bull. de Thérapeutique.*

Ulcer of Stomach treated with Powder of Milk.—M. Debove recommends the evaporation of skimmed milk to dryness, and the resulting powder is given dissolved in hot milk (120 grammes of the powder corresponds to a litre of milk), in cases of simple ulcer of the stomach. To this some dry powder of meat may also be added.—*La France Médicale*, No. 18.

The Conformation of the Eye of a Proteus.—In the arrest of development of a cyclopean eye it has been shown that the crystalline and vitreous bodies are wanting, it being simply the secondary optic vesicle. M. Desfosses has shown that this peculiar condition exists normally in the eye of the proteus. —*La France Médicale.*

Dr. H. I. Berkeley reports (*Maryland Medical Journal*, October 4) a case of tetanus following vaccination.

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PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, NOVEMBER 4, 1882.

EDITORIAL.

PHILADELPHIA HOSPITAL.

IN the Notes and Queries we print a communication from a correspondent concerning the recent affair at the Philadelphia Hospital. The facts of the case, stated briefly, are that Dr. Warder brought an etherized negress in labor into the public clinic, and delivered her with the forceps before some hundreds of students. The thirteenth day the unfortunate woman was seized with septicæmic metritis, and died in a day or two. Immediately after the delivery, the hospital committee threatened Dr. Warder with expulsion from the staff, but later on withdrew from such position. For this they are deserving of much praise, as practically to acknowledge a mistake requires the highest kind of manhood on the part of those who hold the authority and power. Whether it is or is not right to deliver women publicly, Dr. Warder had precedent for his action, and violated no existing rule, so that his expulsion could not have been justified.

We are not quite so sure as our correspondent seems to be of the propriety of these public deliveries. Modesty and tenderness towards women is a distinctly American trait, which has no general existence on the continent of Europe, where women of the higher orders command little respect, and those of the lower orders no consideration at all. We doubt the effect of such public obstetric clinics upon those who sit upon the benches of the amphitheatres. It must be remembered that these clinics are open to all the world, and not merely to medical students. If male and female genitals are to be frequently exposed, common decency requires that, by issue of tickets, show of matriculation tickets, or in other way, attendance shall be confined to *bona-fide* medical students.

Further, there is a very especial reason why, at the Philadelphia Hospital, delivery should not be in the public clinic room. The women have to be carried nearly a quarter of a mile to a room situated between a ward devoted to erysipelas and a mortuary, which, when we have visited it, has often been more remarkable for its odor than for its cleanliness.

An assertion that all this does not increase the danger to the woman would be simply absurd. The long tolerance of these nuisances right by a room where the most delicate operations—even ovariotomy—are continually performed indicates an obtuseness upon the part of the surgical staff that is only accounted for by the years of villany on the part of the Board of Guardians, which long ago made the name of the Philadelphia Hospital a stench in the nostrils of all honest men, not lulled by the miasm of misrule which had settled about the whole institution. We wish the new board God-speed in their efforts to purify the Augean stables, and suggest two things,—first, that the erysipelas ward shall be removed to a safe isolation; second, that the so-called paralytic ward be removed from its present isolated position in the out-wards or Almshouse proper, where it practically does not get medical supervision, and be attached to the nervous ward, where it belongs. We have known sad cases of neglect and malpractice in these wards arising from putting patients away out of sight, seen only by new, and often ignorant, graduates.

MEETING OF THE AMERICAN ACADEMY OF MEDICINE.

THE seventh annual meeting of the Academy of Medicine, just held in this city, appears to have been attended by such evidence of growth, material

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prosperity, and sustained interest in its special work, as to give sincere satisfaction to its friends, and to offer much encouragement for the future. The papers read during the two sessions (October 26 and 27) were of decided value, and dealt principally with broad questions, interesting the profession as a body rather than concerning the details of daily practice, which so commonly engage the attention of our medical societies.

Besides the numerous papers read, the President, Dr. Traill Green, of Easton, delivered the annual address on Thursday evening, October 26, in which he reviewed the course of the Academy and its achievements, showing what changes had occurred since the Academy was founded, and in conclusion quoted from private letters the favorable opinions of various eminent men concerning the objects of the association.

Biographical notices of Dr. H. Lenox Hodge and Dr. Allen, the late president of Girard College, were read by the Secretary, and a report was presented by the Committee on Medical Legislation (Drs. Dunglison and Marcy), which was referred for publication, and the committee continued. In this report, when completed, it is intended to collate the laws of all the States with regard to the practice of medicine.

Among the pleasant features of the session was the receipt of letters from the surgeons in attendance upon President Garfield, acknowledging in warm terms and cordially accepting the resolutions of confidence and sympathy passed at the last meeting of the Academy. At the conclusion of the President's address, the Academy was entertained at the Colonnade Hotel by the Resident Fellows; and the occasion was so much enjoyed as to lead to the adoption of a resolution, before adjournment, authorizing an annual collation hereafter. The membership of the Academy amounts to over two hundred, and fifty-one new Fellows were elected at this meeting. Drs. Henry F. Campbell, of Augusta, Georgia, and Austin Flint, of New York, were unanimously elected Honorary Fellows. The officers chosen for the ensuing year are—President, Dr. H. O. Marcy, of Boston, Massachusetts; Vice-Presidents, Drs. George M. Beard, of New York, William Elmer, of Bridgeton, New Jersey, Cornelius R. Agnew, of New York, and Thomas M. Drysdale, of Philadelphia; Secretary and Treasurer, Dr. Richard J. Dunglison, of Philadelphia; Assistant Secretary, Dr. Charles McIntyre, of Easton. The next place of meeting will be New York: as usual, the time will be the third Tuesday in September.

NEW YORK AND ITS ORGAN.

IF the *New York Medical Record* were as eager exactly to inform its readers of the true state of the case as it is to bepuff New York City, its editorials would often be different from what they are. To be sure, a city which claims to be a medical metropolis, and yet has not a single first-class medical school within its wide domains, needs tergiversation sorely. With Harvard on the one side and the University of Pennsylvania upon the other, we wonder there is not pride enough in New York to start one school upon the higher plane. On second thought we cease this wonder, for New York did start one such school not long since, and maintained it just one year, when its stock of pride and conscience was exhausted.

These remarks are called forth by a recent labored editorial in the *Medical Record*, so worded as to give the idea that systematic post-graduate instruction was this winter, in New York City, inaugurated for the first time in this country. Really the *Record* presumes much upon the good nature or laxness of its readers in thinking they have never read the advertisements of Harvard University or of the University of Pennsylvania.

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JOHNS HOPKINS HOSPITAL.

IT is stated in the *Maryland Medical Journal* that the trustees of the Johns Hopkins Hospital propose opening that institution next autumn. The buildings, with the exception of the laundry, are all under roof, about one million three hundred thousand dollars having been spent upon them. In none of them has any inside work been done, other than flooring, staircases, and heating apparatus, and to finish during the coming summer will require active work. The buildings, when complete, will, in our opinion, be the finest of the kind in the world. The medical school may well be in operation two years before the hospital is in full activity. The course of instruction is to be extended over four years, and students will not be ready for practical bedside study until their third year. We are not in the secrets of the trustees of the University, but it is plain that the time is approaching when the medical faculty must be appointed. For the honor of our country, but especially for the good of the race, we trust the great opportunities now offered will be wisely embraced. With proper selections, Johns Hopkins University and Medical School may become a great centre of light and progress in the science and practice of medicine. The American intellect is equal to any in the world: what is needed is opportunity.

FAIR play and no favor has been repeatedly stated to be all that is desired by the friends of the women physicians in their competition with the sterner sex; but this principle was hardly exemplified last week, when the committee in charge of Blockley Hospital dropped a gentleman of the medical staff who had faithfully served and had long been identified with the institution, for the sole purpose of making room for the appointment of a doctress who desired his position. In order that the issue with the profession might be fairly joined, the board passed a series of resolutions to the gentleman (whose sex appears to have been his misfortune, though not his fault), assuring him in complimentary terms that he lost his position not from any neglect of duty, nor from personal objections, but solely for the reason stated. Without discussing the obvious complications arising from a mixed staff, we merely observe that it is such questionable victories as this that injure the cause of true reform, and usually yield but a temporary and doubtful advantage to those who immediately profit by them.

TREATMENT OF ASCARIDES LUMBRICOIDES.—Dr. Guermonprez sums up a long article on lumbricoides thus: (1.) Worm-seed (whose action is not to be confused with that of santonin) is by far the best medicament for killing, as well as expelling, round-worms. (2.) Santonin does not kill the worms outright; it excites them to livelier movements, and these may reflexly stimulate the intestine so as to expel them; but they may also only exaggerate the evil if there is obstruction. (3.) Santonin is, therefore, by no means always to be chosen. It does no harm if the worms are young and not numerous; if they are mature and many, it may be dangerous even in reasonable doses. (4.) The purgatives usually given with vermifuges probably do more than the latter to cause expulsion of the worms; simple evacuation will often suffice. (5.) Ordinary hygienic means directed to overcoming the lymphatic cachexia of the patient, or simple change of food and abode, may at times be enough to rid him of the worms without any medicine whatever. (6.) Hence our treatment should not be the mere routine administration of santonin, but should be determined by the circumstances of the case. Change of air and of diet, and simple evacuation, are not to be forgotten.—*Bulletin Gén. de Thérap.*, p. 89, 1882; *Practitioner.*

REMEDIES FOR MALARIA.—"If you know your business, and it is a temperance town, you wink at the drug clerk, and say something about malaria. It is a matter of indifference just what you say. The single word 'malaria' is the golden open sesame. . . . Whenever I see a man coming out of a drug-store and wiping his mouth on the back of his hand, I realize to its full and awful extent the hold that malaria has on this unfortunate people. What the drug-stores in towns where a strict license law prevails would do without 'malaria' is a hard problem."—*Western Ex.*

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LEADING ARTICLES.

CEREBRO-SPINAL FEVER.

THE fact that cerebro-spinal fever tends to establish itself permanently, to become endemic, in regions in which it has prevailed epidemically, is so well recognized that it would, under ordinary circumstances, scarcely excite comment. Within a few weeks, however, two well-marked cases, of which one proved fatal, have fallen under my observation in private practice. It appears to me at this time worth while to give more than passing heed to the extent of the prevalence of this disease in our community, and to call to mind some general facts concerning the rise and extension of the great epidemics of the past. Cerebro-spinal fever with us, like typhus in Ireland, which has been compared to a smouldering spark, ready at any moment to leap into flame, may sweep from a few cases widely scattered to a destructive epidemic.

Stillé suggests that the history of cerebro-spinal fever during the present century may be divided into three periods, each of which comprises the account of a wide-spread prevalence of the disease upon both sides of the Atlantic, lasting for a series of years. The first of these outbreaks lasted eleven years, from 1805 to 1816; the second, thirteen years, from 1837 to 1850; and the third, which began in Europe in 1854 and in North America in 1856, came to a close in 1873, after a continuance of from seventeen to nineteen years, with, however, a period of repose in the United States from 1857 to 1861.

It is to be remembered, however, that in the periods of non-activity cases and even small epidemics of the disease have been observed, and that in recent years occasional limited outbreaks have led so careful an observer as Ziemssen to believe that the disease has become an abiding one in Europe.

There is thus some warrant for regarding cerebro-spinal fever as having had, during this century, a continued existence within certain geographical limits, as having had its periods of epidemic outbreak and its periods of quiescence, but never as having wholly ceased to exist within those limits, or as having disappeared in the same sense that cholera and influenza disappear from the same countries in the intervals of their epidemic visitation.

In looking over the Health Office Reports of this city, as far back as 1857, I find no deaths reported as due to this disease prior to the year 1863. In that year forty-nine deaths were ascribed to "spotted fever," forty-four of these cases being minors, five adults. In his report of that year, the health officer called attention to the fact that many cases of death due to cerebro-spinal meningitis were doubtless attributed to other causes, such as malignant fever, congestive fever, typhus, or malignant typhus, or merely fever, and to these we may safely add convulsions.

The table on the opposite page, compiled by Dr. C. F. Clark, is designed to exhibit the number of deaths returned for each year since 1860 as caused by cerebro-spinal fever and the affections with which fatal cases of cerebro-spinal fever have been most liable to be confounded.

This table is of interest not merely as showing approximately the number of deaths from the disease in question, but also as indicating in some measure the ignorance of its clinical characters prevalent among practitioners of medicine when it appeared in an epidemic form in this city, twenty years ago. Those who recognized it in 1863 designated it by the old and inexact term "spotted fever," a term which continued extensively in use the following year, but which forthwith fell into almost complete desuetude as soon as a familiarity with its constant pathological characters forced the profession to recognize the new-comer as a substantive disease, and suggested a designation embodying at once the idea of its infectious nature and the anatomical lesions.

That a great number of cases should have been classed under the heading "typhus fever" cannot be a matter of surprise when we call to mind the fact that cerebro-spinal fever was not at all known as a distinct affection until early in the present century, and that for many years it continued to be regarded by most practitioners and many learned writers on epidemic diseases merely as a variety of typhus.

Moreover, widely as they differ in many respects, these two diseases, viewed from the clinical stand-point, present many points of resemblance. They show us alike suddenness of onset, grave disturbance of the functions of the nervous system, fever characterized by a stadium

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Year.	Cerebro-Spinal Meningitis.			Spotted Fever.			Typhus Fever.			Convulsions.			Malignant Fever.			Congestive Fever.		
	Adult.	Minor.	Total.	Adult.	Minor.	Total.	Adult.	Minor.	Total.	Adult.	Minor.	Total.	Adult.	Minor.	Total	Adult.	Minor.	Total.
1860.....	0	0	0	0	0	0	10	6	16	11	263	274	0	0	0	1	0	0
1861.....	0	0	0	0	0	0	33	12	45	30	306	336	0	0	0	3	3	6
1862.....	0	0	0	0	0	0	25	12	37	40	663	703	2	0	2	7	1	8
1863.....	0	0	0	5	44	49	55	76	131	53	628	681	1	11	12	18	25	43
1864.....	27	117	144	35	205	240	149	186	335	40	696	736	13	63	76	14	63	77
1865.....	28	102	130	11	51	62	250	84	334	40	655	695	9	8	17	16	21	37
1866.....	18	57	75	1	16	17	68	28	96	34	663	697	2	2	4	11	9	20
1867.....	53	49	102	2	5	7	111	27	138	31	553	584	0	0	0	11	7	18
1868.....	12	42	54	1	0	1	83	25	108	35	669	702	0	0	0	7	8	15
1869.....	7	29	36	0	1	1	28	21	49	31	616	647	1	0	1	5	4	9
1870.....	5	31	36	0	0	0	47	22	69	52	681	733	0	1	1	5	2	7
1871.....	11	33	44	3	2	5	27	10	37	26	613	639	0	0	0	3	6	9
1872.....	36	92	128	2	3	5	25	10	35	36	716	752	0	0	0	8	4	12
1873.....	54	192	246	0	0	0	13	18	31	349	333	682	0	0	0	6	2	8
1874.....	14	68	82	0	0	0	17	9	26	23	654	677	0	0	0	3	1	4
1875.....	14	69	83	0	0	0	16	5	21	59	752	811	0	0	0	0	0	0
1876.....	17	67	84	0	1	1	19	8	27	83	811	894	0	0	0	1	1	2
1877.....	7	49	56	0	0	0	8	7	15	379	324	703	0	0	0	0	1	1
1878.....	16	74	90	0	0	0	7	2	9	16	678	694	0	0	0	1	0	1
1879.....	15	47	62	0	0	0	1	0	1	22	604	626	0	0	0	1	0	1
1880.....	8	70	78	0	0	0	17	3	20	20	717	737	0	0	0	0	0	0
1881.....	17	73	90	0	0	0	9	3	12	18	763	781	0	0	0	0	0	0
1882.....	...	...	41 Cases of Cerebro-Spinal Meningitis "to September 23."															

of excitement followed by a stadium of depression, cutaneous efflorescences, a high death-rate, the tendency to epidemic outbreak. Regarded more closely, however, these resemblances are found to be only superficial, and the revelations of the necropsy show them to be due to pathological processes essentially unlike.

That the number of deaths ascribed to "malignant fever" should have been considerable in the early years of the epidemic can, in view of the well-known characters of cerebro-spinal fever, occasion no surprise other than that so vague a term should at any time have been regarded as admissible. It is to be observed that since 1866 only four cases have been so reported, and since 1870, none.

Pernicious intermittent fever, under which head is to be included the congestive form, may, with its fulminant manifestations, its speedy collapse, and fatal coma, be readily confounded with the so-called fulminant variety of cerebro-spinal fever. The diagnosis rests upon a consideration of the etiological factors of the two diseases.

The season of the year, a history of exposure in an insalubrious region, or the endemic or epidemic prevalence of ordinary intermittent or remittent fever, tend to clear up the obscurity arising from any accidental resemblance of the symptoms. Moreover, an attack of intermittent fever rarely declares itself as pernicious or malignant in the first paroxysm; it is only after one, two, or more seizures, differing not at all, or but slightly, from the common manifestation of the disease, that it discloses its true character.

The remarkable increase of deaths ascribed to this cause during the years of the epidemic prevalence of cerebro-spinal fever, as shown in the table, is due not to an association of the causes, but to confusion of the effects. It will be observed that since 1874, the year following the close of the epidemic as such, the number of deaths attributed to congestive fever has reached in all only five, against four for 1874, eight for 1873, and so on back. The total for 1863 was forty-three, and that for 1864 reached seventy-seven, a record so out of accord with our common experience as to warrant the assumption that most, if, in fact, not all, of these deaths were due to the then epidemic disease.

"Convulsions" constitutes so loose a category in mortuary statistics that I can find no inference deducible from this column in our table save this: that many different maladies in which convulsions constitute the principal morbid phenomenon or accompany the death-agony must be returned under this heading. This symptom, which must often be elevated to the importance of a diagnosis of necessity, is too often constituted a diagnosis of election.

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Cerebro-spinal fever presents certain peculiarities in its mode of attack, its extension, its course and duration as an epidemic disease, that separate it widely from other epidemic diseases. It has more than once broken out with activity almost at the same time in the New and the Old World; in many instances it has appeared simultaneously at points as far distant from each other as the diameter of a kingdom, while the intermediate regions have remained free from it, not only while it prevailed in the regions attacked, but afterwards; and in general epidemics, such as have prevailed in Sweden, portions of Germany, and in districts of our own country, certain localities in the midst of the infected regions have wholly, or almost wholly, escaped its ravages.

This fever differs from other epidemic diseases also in its mode of extension. In general epidemics it has much more frequently been observed to spread by a series of isolated outbreaks of irregular distribution than by a direct advance from place to place or by radiating lines from an infected centre. This is not, however, an invariable rule, as is seen, for example, in some of the French epidemics, where the advance of the disease went hand in hand with the movements of troops, or where it corresponded with the course of a river, as in the epidemics which traversed the valley of the Loire, or in that great series of epidemics which passed over Sweden from the southwest towards the north, beginning in 1854, and raging fiercely and widely until 1861. Hirsch has pointed out this peculiarity of the Swedish epidemic,—that, starting from the province of Göthenburg, in the Skagerrack, in the southwest, it crept steadily towards the north, cases occurring in every season of the year, and districts affected one year almost wholly escaping the next; while the southern boundary of the new area visited by the disease corresponded very nearly with the northern boundary of that in which it had existed the year before. Strange to say, Norway wholly escaped until 1859, when the fury of the disease was beginning to abate in Sweden, and then experienced it only in circumscribed outbreaks. When, however, we trace the march of the disease more closely in these and similar epidemics, we are struck with the fact that its progress is still by a series of isolated outbreaks,—not, in these cases, of irregular distribution, but in the general direction of the line of advance.

Not less remarkable is the course of the disease in an infected population. Its wide geographical distribution by no means represents a general diffusion among the inhabitants of the cities, districts, and countries in which it has prevailed. Scattered cases and groups of cases may occur over a wide area without any great tendency to a concentration of the violence of the epidemic, while, on the other hand, the whole number of cases may occur within restricted limits, and this is the common rule. Many epidemics have attacked a single class in the community. This was the case in France in 1837 and the following years, when the disease chiefly affected the soldiery, often being confined to a garrison or a section of a garrison, sometimes even to a single regiment, without extending to the surrounding populations; and in 1844, at Gibraltar, where the civil population bore the brunt of the attack. The same limitation of the cases to a class among the people was observed during the epidemic in Italy, where, in 1840, an outbreak at Procida was almost exclusively confined to the convicts in the galleys; in Ireland, where, in 1846, the inhabitants of the workhouses principally suffered; and in the late American war, at Newberne, at Memphis, and in the neighborhood of Washington, where the troops alone suffered.

Finally, this disease presents remarkable differences from other epidemic diseases, in regard to its duration as an epidemic. In this respect it has, at different places and in different outbreaks, shown the most extreme variations. Most of the epidemics have lasted from three to six months; others have been of shorter duration, coming to an end in a few weeks; while it has frequently happened that new cases have appeared throughout an entire year, or from the spring of one year till the end of the following winter. The duration of the epidemic depends upon causes not yet known. It cannot be said to be influenced by the size of the population; for on one hand we read of comparatively brief outbreaks in populous cities like Berlin and Vienna, and on the other of lingering epidemics in such relatively sparsely inhabited countries as Algiers and Sweden.

The epidemics are often, in spite of a

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duration of several months or even of a year or more, limited to a relatively small number of cases in the infected community,—a few individuals here and there being attacked, and the mortality being moderate. In other instances, on the contrary, considerable numbers suffer and the death-rate is high, and, as Hirsch points out, the proportionate number of persons attacked and of fatal cases are not seldom in inverse ratio to the duration of the epidemic, a relatively great number of cases occurring, with a high mortality, in epidemics that came to an end in a few (six to eight) weeks.

Sometimes the outbreaks do not, as is the case with most epidemic diseases, rise steadily to an acme and then gradually decline, but seem to run an irregularly intermittent course, a number of persons being attacked, then the disease to all appearances vanishing, only, however, to return after a time to seize new victims, and this disappearance and return being repeated till the close of the epidemic, after many weeks or months.

Still more strange is the fact that cerebro-spinal fever once having appeared as an epidemic in a region previously free, may, and often does, take up its abode as an endemic disease. Our table clearly shows that it is at home in this community. Errors of diagnosis are not likely to occur: the disease has become a familiar one.

The cause of cerebro-spinal fever is as yet unknown. Much less is known of the laws which control its origin, its distribution, its action in communities and upon individuals, than is known of the active cause of the other infectious diseases. The unaccountable appearance of the disease at the same time in widely-separated localities, its diffusion by isolated attacks rather than by direct advance, its variable and often long-continued prevalence in epidemics, its sporadic occurrence between the epidemics, the extraordinary diversity of the symptoms in different epidemics and in different cases, baffle the comprehension and render futile every effort to formulate even a satisfactory hypothesis of its cause and origin.

Should it again become epidemic,—a danger not to be ignored, in view of the lessons of the past,—it is to be hoped that the improved methods of investigation now shedding light upon the nature of the cause in the infectious diseases will bring to day the infectious principle of this fever, of all diseases the most erratic in its epidemic spread, the most protean in its clinical manifestations; a fever that well merits the term applied to it by the learned Stillé,—this "chameleon-like disorder."

JAMES C. WILSON.

CORRESPONDENCE.

LONDON LETTER.

THE season has once more come around for the opening of the winter session at the various medical schools. A large number of hopeful youths come up to enter the curriculum which is to convert each of them into a wise physician, a bold surgeon, and a skilful obstetrician,—if they are only fortunate! How many per cent will fall out of the ranks before the student-march is over, it would be invidious to calculate. Preliminary examinations have driven away much of the hopelessness which once attached itself to a medical career. Of old, before the day of the matriculation examination, every idle fellow, when his friends were getting tired of his doing nothing and insisted upon his electing some career, decided to be a medical student. He could commence without any difficulty of examination; his studies would not be so severe at first; he could read up his Latin, and pass it, before any medical examination was due: after that he would proceed with his studies, like the rest. Hopes that perhaps were never very seriously entertained by the aspirant were not unfrequently never realized. The Bohemian life of a medical student was attractive; the social waif took kindly to it. Time wore on. The Latin was not passed, and the Bob Sawyer grew older and seedier, and ended either as an unqualified assistant to some indifferent practitioner in a low suburb, or made a new start, perhaps, as a full private in one of her majesty's regiments. But all that has been swept away, and belongs to the past as much as the resurrection-man. The medical student of to-day is a well-set-up youth, smart, gentlemanly, perhaps a trifle confident in himself, with a great impression as to the mystery of the human skeleton. He has passed his entrance-examination in a manner highly gratifying to his female relatives. His mother and sister are glad to be asked about him, and reply with conscious pride; while his old maiden aunt, from whom he has expectations, has sent him an affectionate epistle, with a five-pound note in, with a hint not to be extravagant in walking-canes, and has finally determined he shall occupy a prominent position in her last will and testament,—an instrument she will forthwith proceed to instruct her solicitor to execute. So

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he is fully entered as a medical student, who can tell of the odors of the dissecting-room or the chemical laboratory, of the immense operation he witnessed without feeling squeamish, to the undisputed admiration of his old chums, who look upon him as certain to make his mark in the world. Yes, he will make his mark, only it would not be exactly easy to say what it will be in all cases. In most it is easy to prophesy a successful termination to the student career. The number who fall out "by the way" now is comparatively small, and when gentlemanly youths get into the police court they do not now pass themselves off as medical students, of whom such scrapes were rather to be expected and of which little notice need be taken beyond the infliction of the resultant fine. All that belongs to the past. This year the medical student has come forward freely. Farming is not very lively; with falling customs, trade is not as attractive as it was; but, despite the Sanitarian, disease holds its own, and therefore the prospects of doctors keep up. So the freshmen have been treated to the usual blend of welcome, good advice, and caution in the shape of the introductory addresses. One sad incident occurred in connection with these addresses. The gentleman on whom devolved the duty of delivering the address at the Middlesex Hospital died on the day his address should have been delivered. Dr. R. W. Lyell was a distinguished student at King's College; then he became tutor at the Middlesex, where he was a general favorite with his pupils. He was afterwards elected assistant surgeon to the hospital, and had before him a career full of promise. Ten days before the day of opening the winter session he was at the hospital, after which he felt a rigor. Pneumonia, the scourge of the overworked men, set in, and his career closed with terrible swiftness. One more lesson is thus taught by the medical profession,—that doctors just overwork themselves as much as the patients whom they lecture for it and advise. The address was delivered by Dr. Cayley, who had no time to prepare an elaborate address, and who entered his protest against "the arrest of experimental research" in Great Britain in the present day. "If Harvey had lived under Queen Victoria and the present restrictions, he never would have been able to discover the circulation of the blood." Well, there was little about the rule of the Stuarts to be thankful for, but it was well for Harvey in more ways than one that he lived under the reign of the "Merry Monarch." At St. Mary's the address was delivered by Dr. King Chambers, with whose charming writings all are familiar. Of course our expectations soared high when we learned that Dr. Chambers was "bidding farewell to his old chair, which illness prevented him from doing years ago." We think of some beautiful addresses by him in days gone by. We hope to hear another like them, and find that, for reasons of his own, he has selected as his topic "The Relation of the Medical Student to the General Medical Council." He is the junior member of that august body, "whose most important duty was to watch over the student," to see that he got the value of his money, and speed him on his way to become "a useful and honored Englishman." He made out a good case in contrasting the student of the present day with the Dick Swiveller type of the past.

After their students' days were over they might become "assistants" to practitioners, but not before. He then delivered himself of some trenchant remarks on the "unqualified assistant," and the persons who tempt men to become such. "They do it for their dirty profit, and it is a very bad bargain for you." This is very unlike the stately, indeed, courtly, language of Dr. Chambers ordinarily; but, like other folks, he finds a difficulty in applying choice language to unsavory subjects. He expressed a strong belief that "the catechetical method of teaching" must largely take the place of the formal lectures now in vogue in medical teaching. "The quiz class" is coming more and more into fashion everywhere, both as a means of teaching students and an education to them to express themselves. Dr. Chambers thought this much better than "sitting out" a stated number of lectures, as it did not keep the working man tied down to the sluggard. If a student could stand the cross-examination on any subject, then he could devote his time to something else. He then took formal leave of the school where he first lectured before the plaster was dry upon the walls.

At St. Thomas's, Dr. Sharkey referred to the early history of medicine, when it was in the hands of the priest; then to times when it bloomed out into flower, "warmed by the glow of some enthusiastic genius," to fall back again for long years. Physiology has made modern medicine, he asserted. It had, too, done much for treatment. "We have thrown down the idol of universal specifics, which men had hewn out of false conceptions of disease. We have set up in its place rational scientific treatment, founded upon the knowledge of physiological processes in health and in disease;" while our acquaintance with the action of drugs enables us to wield them with more precision than was possible in the past. The scepticism as to specific remedies for all maladies which was the natural outcome of such direction of thought was not, he held, an evil, provided it were not carried too far. Men did not heap up a lot of different ingredients in a prescription nowadays, but wielded their remedies rather "as arms of precision," compared to the "mitrailleuse system" of former days. He thought the days of "systems of medicine,"

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of "pathies" of all kinds, numbered, and that the day of the scientific study of medicine had dawned.

At University College Hospital the address was delivered by Mr. Marcus Beck, assistant surgeon thereto, a fact which drew a larger attendance. Mr. Beck is quite worthy of his school, which is pre-eminent in medicine the world over. He referred to the surgeon-apothecary of past times, with his education of apprenticeship, like any other craftsman. But early in this century these men set on foot a movement which led to an act being passed in 1815, after which every apothecary must receive some distinct medical education. Since then the standard of examination had steadily risen. He thought some knowledge of botany and zoology very desirable for a medical man, as part of the mental training requisite for a practitioner. He held, however, that the real study of these subjects was often delayed by the student till it became a case of "cram" at last, which deprived it of its value as mental training. It was not, however, he held, desirable to prolong the course of medical study till it was placed beyond the reach of many men who wished to study medicine. As to those who asserted that the value of mental training in medicine was small, it was unnecessary to confront them. The advances made in surgery in the last twenty years were acknowledged on all sides. If the student could pass his entrance-examination at sixteen, he would be usefully engaged on botany and zoology till the next year, when he might begin the study of medicine proper. He thought it as desirable to protect the student against "the irregular and unscientific course of study that he is too often allowed to pursue" by proper examination, as it was to protect the public against ignorant practitioners.

At St. George's, Dr. Herbert Watney took much the same line, and spoke of the study of "materia medica" as compared to "pharmacology" as a case of "survival,"—an opinion with which few will disagree. "A scientific education implies study with a view to the acquisition of knowledge apart from any ulterior object; practical education implies the study of any subject in such a manner that we can bring our knowledge to bear at the present or any future time." He went on, "Science is not liked by some, because it makes so little of the individual opinion, and treats so lightly that power which some men have of enforcing their views and persuading their fellow-men. In politics and in art we see the immense influence of the individual,—how his word is taken almost as law; yet the habit of accepting without question what is told us has been the most fatal stumbling-block to the advance of medicine." In the Middle Ages the shadow of Galen hung over medicine, and the men engaged themselves "seeking rather to conquer their opponents in argument than to penetrate the secrets of nature." Now we have a better scheme. "At last we are driven to the conclusion that medicine is a progressive science, and that we are profiting by the information obtained by others, reaping the fruit sown by them at great expense, after many failures and much disappointment." He told them, "It is very necessary that you start with one humbling thought,—that you cannot finish your studies, and that you must go into practice to a certain extent incompletely prepared." But the consciousness of such incompleteness will spur men on to attain the perfection or fulness of knowledge, or, at least, to attempt to do so.

At King's College, the Right Hon W. H. Smith gave away the prizes. After pointing out that the English achieve their great ends by having sound minds in sound bodies, he went on to say that the duty of a doctor, in his opinion, was to go beyond the position of a medical adviser, and to become the friend of his patient. In this way he could often do more than by the mere administration of medicines and drugs. Tact and judgment, he felt certain, existed now to as great an extent as they did formerly. Truth he recommended to medical men in dealing with their patients, and he recommended it as one who had passed the summit and was going down-hill. When a man had obtained a reputation for truthfulness, any hope he might hold out was almost the best kind of tonic that could be given, but, on the other hand, the medical man who was known to give hope when there was no hope lost much of his power. (To whom the Right Honorable gentleman referred in this last sentence is unknown to the writer. It does not apply to any of the well-known heads of the profession, that is certain. Possibly it applies to a brood of medical parasites who cling to the skirts of the socially great, but who are practically unknown to the profession.)

At the London Hospital a conversazione was held in the evening, when Jonathan Hutchinson gave an address which was mainly about Carlyle. He spoke of Carlyle's antipathy to Darwin's views. He was too impatient, he said. "The truth is that what Carlyle himself was proclaiming in the language of the mystic, Charles Darwin was explaining in the language of science. Carlyle was asserting that there is a spiritual power in nature, was bidding us reverence that power as supernatural, and as working, through rough and mysterious ways, towards certain and definite good. Darwin, looking at the same facts from a biologist's stand-point, explained how this result did indeed come about, and that, too, through the simplest and most unmysterious ways." Then he went on to point out how the ideas of Wordsworth and of Browning harmonized with the principles of Darwin, the whole telling that even the wary, cautious surgeon and philosopher no longer thought

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it unsafe to consider Darwinism and evolution before a mixed company at a medical conversazione.

At the Leeds School the address was delivered by T. R. Jessop, a worthy scion of the school of the Hays and Teales. He preferred to take a bird's-eye view of the recent progress of surgery. He said that these improvements were at least synchronous with the teaching of Lister. Even in such a matter as scirrhus of the breast, cases which but a short time ago would have been dismissed as "too late" were now operated upon, and deep dissections were now rendered possible by the aid of antiseptic precautions, and compatible with life and the healing of the wound, that recently would have been regarded as unjustifiable. As to cancer elsewhere, its removal soon and completely was becoming possible even in the interior of the body. Left lumbar colotomy was now an operation no longer formidable. Bones were now cut and chipped with chisels safely. It was no longer a matter of dread to lay open a joint if desirable. He said, "In the days of festering wounds, when phagedæna (of which I hardly see an example now) was a perennial visitor in our wards, when pyæmia and septicæmia marred the statistics of all our hospitals, the risks involved in the presence of a wound communicating with injured bone were so terrible as to forbid the surgeon from voluntarily inflicting a compound fracture to obtain a merely æsthetic result." Now all this is changed. Repeated osteotomies are performed without hesitation for deformities. Cleft patellæ are wired together, healing kindly. Loose cartilages are fished out of joints. Kidneys are extirpated; but this operation is still a very serious one.

Such, then, was the recital of what is being done at one of our best surgical schools; such the modern triumphs. Listerism was tried on the field of battle in the recent campaign in Egypt, and with success; and the new method of treating surgical wounds is enabling much to be done successfully that even in modern times would have been thought out of the question. These addresses to students interest their seniors little, may seem commonplace, for much that is novel cannot be expected, yet they are useful for the impression they make on the students' minds at the threshold of a new phase of their existence.

J. Milner Fothergill.

High Temperature in Belladonna-Poisoning.—A case is reported in the *British Medical Journal* for September 23, of a fatal case of poisoning in a child from eating the berries of the deadly nightshade. The narcotic symptoms appeared two hours, and death nineteen hours, after eating the berries, being preceded by coma and a temperature of 110° for several hours before the fatal result.

PROCEEDINGS OF SOCIETIES.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, October 19, 1882.

Dr. Fordyce Barker, President, in the chair.

The scientific paper of the evening was read by Dr. T. E. Satterthwaite, and was entitled "*The Origin and Natural History of Tuberculosis.*"

The study of tubercle had always attracted profound interest chiefly because of the close relation it holds to pulmonary consumption. The most notable advances in its study had been made in the present century. The names of Bayle, Baillie, Laennec, Louis, and Rokitansky in the earlier half of the century were connected with a number of facts in the history of the disease, but it would seem probable that the researches of the last fifteen years surpassed them in thoroughness, exactitude, and practical utility. This might be accounted for by the fact that the older writers based their work almost exclusively on morbid anatomy, while modern workers had utilized both pathological histology and experimental pathology. "Let us," said the author, "take up the history of the subject with a view to determining the vital questions which are at issue, and which centre about—first, the histology of phthisis; second, its unitarian, dual, or plural nature; third, its so-called infective qualities; fourth, the mode in which it originates; fifth, the intimate nature of the presumed infecting agent."

He used the word tubercle as meaning the miliary tubercle, the pearly or gray granulation of Bayle or of Laennec. It seemed to have been first described by Mangetus. Laennec stated in 1819 that tuberculous matter occurred either under the form of insulated bodies or of an infiltrated substance. He did not consider tuberculosis (pulmonary) as inflammatory, nor that pneumonia was transformed into phthisis. Reinhardt, however, soon challenged these views, and had little difficulty in demonstrating that the so-called infiltrated tubercle had properties which would naturally belong to an inflammatory deposit undergoing cheesy transformation. Virchow accepted Reinhardt's discovery, and repudiated the statement that there was any so-called tubercle which was not of the miliary variety. He also demonstrated conclusively that the yellow infiltrated or crude tubercle might originate from inspissated pus or encysted parasites. But it was often impossible to trace any genetic relation between miliary disease and certain forms of phthisis, and the adherents of the unitarian theory naturally sought for some other cause, and gave room for the doctrines of Niemeyer, who attempted to connect phthisis with pneumonia, of which it might be a natural sequel. Buhl, however, soon succeeded in turning

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opinion back to the French school by showing that bodies resembling tubercles in their gross and microscopic appearance might be produced in animals by the presence in the body of certain centres of infection,—cheesy foci.

Dr. Satterthwaite then reviewed the subject of experimentation on animals by different investigators, regarding the ingestion of tuberculosis matter, its inhalation in a state of minute division, also the inhalation of Limburger cheese, of powdered bran, etc. The following were some of the conclusions reached: that there was one class of experimenters who claim that the inoculation of phthisical matter produces a specific disease, among whom were Villemin, Gerlach, Tappeiner, Weichselbaum, and Baumgartner, and also at present Cohnheim; while among those who do not believe in a specific virus are Fox, Burdon Sanderson, Sir Andrew Clark, Schottelius, Scheuppel, and Wargusini. This truth remained, that observers of the highest reputation had recorded results from the same series of experiments diametrically opposed to one another. Clinical facts did not aid us materially, for, while it was claimed that communication of phthisis frequently took place among cattle by cohabitation, it was to be remembered that the tuberculosis of animals was in several ways distinct from that among men, and the evidence of those who had a large experience in consumptive hospitals was not favorable to the contagion theory. We therefore seemed justified in claiming with Virchow that neither "experiments nor clinical observations up to the present moment have furnished any decisive facts." Wolfe had recorded a case showing that a simple traumatism of the eye in an apparently healthy child set up miliary tuberculosis that led slowly but steadily to systemic infection. He referred to the experiments of Prof. Siedamgotsky on the question "Whether and how far the use of the meat and milk of cows which have the pearl disease or bovine tuberculosis is harmful to human beings." This gentleman felt justified in concluding that his experiments yielded no result giving any positive support to the statement that tuberculosis can be conveyed to mankind through the milk or meat of tuberculous cattle.

The author considered Koch's theory in support of the doctrine of a specific parasite in tubercle, this investigator claiming to have found a peculiar microphyte in every form of tuberculosis. He gave the results of some of his own investigations in this direction, and then took up the question "Is Tuberculosis Hereditary?" finally closing his paper with the following conclusions, drawn from his study of the subject of tuberculosis:

1. Tuberculosis is a disease that fairly deserves the name hereditary, for it attaches itself to certain families throughout many successive generations. It is most apt to attack those members who are deficient in physical vigor from whatever cause.

2. The most distinguishing characteristic of tubercle is the occurrence in the tissues of minute, bright, glistening, translucent particles, that have been called miliary tubercles, granula, granulations, etc.

3. They are the result of an inflammatory process, because they can be produced by the introduction of mechanical irritants into the system.

4. When these minute bodies coalesce to form larger bodies and undergo a change of color, they are known as crude or yellow tubercles.

5. Some of them contain the reticulated tissue that has been called adenoid, because it resembles the retiform tissue of lymphatic glands. As the miliary tubercle advances in age, one or more large multinuclear foci may be found either at the centre or periphery of the nodule. Sometimes Scheuppel epithelioid corpuscles are found, sometimes lymphoid elements, and sometimes fibrous tissue; but no one of these tissue-elements, which belong to the connective-tissue series, is pathognomonic of tubercle.

6. The lungs and serous membranes are most frequently attacked, and it is here that the natural history of tubercle is studied to the best advantage. In other regions of the body there may be modifications of the tubercle, so that its distinctive character is difficult to demonstrate.

7. In the gradual development of these bodies they undergo caseous change at the centre, which phenomenon is another marked feature of tubercle. Still, in some instances we have reason to suppose that the miliary tubercle may become organized, and thus a cure result.

8. Tubercles are rarely found without more or less contiguous inflammation, which, within the lungs, may be classed as a pneumonia. It is the infiltrated tubercle of Laennec, the catarrhal pneumonia of Niemeyer, or the desquamative pneumonia of Buhl. It may perhaps be protective in some instances, serving to wall off a caseous process, thus preventing it from becoming disseminated, or it may eventually itself participate in the same process, and lead finally to necrosis of the lungs and the production of cavities.

9. Tubercles may be confined to a limited area and a single lobe of the lung, or a single lung, or they may be diffused pretty equally in different organs. Generalized, disseminated, or secondary tuberculosis is the most dangerous and malignant, and is probably due to transmission of the disease by the lymphatics or blood-vessels, usually the latter. In this secondary form the first manifestations are the gray granulations, as they are also in the primary form.

10. Tuberculosis is inoculable, producing its kind if it produces anything, but other

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substances will also, in a certain number of cases, produce the same apparent lesions; in fact, not only any organic substance that is capable of physical deterioration, but also a variety of non-organic substances.

11. There is some good evidence favoring the theory that consumption is contagious,—*i.e.*, that it is capable of propagation by cohabitation, or, in other words, close association, with persons who have the disease.

12. The morphological differences between the form of phthisis of the domestic animals and that of the human being are such as to put us on our guard against forming hasty conclusions from a comparison between them.

13. It does not appear that we have good grounds for believing that the meat or milk of phthisical cattle when taken as food has ever produced a single instance of tuberculosis in the human being.

14. But we should none the less discountenance the sale of such meat or milk, since, even if they are not infectious, they are deficient in proper nutritive elements, and for this reason alone should be debarred from sale.

15. And so in the case of bovine virus, though it does not appear that any person has been rendered tuberculous, yet no vaccine virus should be held to be suitable for vaccination purposes unless proper assurances are given that the animals yielding the vaccine were in every respect free from tubercle, as determined by inspection after slaughtering.

DISCUSSION.

Dr. DELAFIELD said his own interest in tuberculosis had been chiefly with regard to its morphology. It had seemed to him that there was a definite anatomical product which might be called tubercle-tissue, composed of basement substance and cells. It did not differ essentially from other inflammatory products of connective tissue. Such tubercle-tissue was by no means identical with miliary tubercle. Miliary tubercle simply expressed the gross appearance of certain little nodules found under certain circumstances, some of them composed of tubercle-tissue, and others not. He believed that inflammatory products might be so arranged as to form either miliary tubercle or diffuse inflammation. The study of tubercle was always complicated by the fact that tubercle-tissue, granting there was such a thing, was scarcely ever produced by itself, but was almost always present in combination with ordinary inflammatory products, acute, or chronic, or both. So far as he knew, pulmonary phthisis never occurred in adults without the production of tubercle-tissue, with one exception, namely, pure interstitial pneumonia. Ordinary chronic pulmonary phthisis in the adult was accompanied with such an amount of tubercle-tissue as to give one the idea that this was the essential part of the process, although there were present complicating inflammatory products.

Dr. JACOBI did not believe that Koch's theory concerning tuberculosis was by any means proved: it was only another parasitic theory, such as had been presented many times. He was inclined to believe that tuberculosis and phthisis were two distinct diseases. This much was certain, that there were many cases of tuberculosis without phthisis, and many cases of phthisis without tuberculosis. That view did not include that the two diseases could not exist in the same individual, nor that tuberculosis might not become phthisis, nor that phthisis could not become tuberculosis. In opposition to the parasitic theory was the fact, as had been mentioned by Dr. Satterthwaite, that according to many observers a diathesis was always necessary to the development of tuberculosis or phthisis. Some called this scrofula, and the old question whether so-called scrofula or tuberculosis or phthisis were not essentially one and the same process was not at all settled. There were other important facts to be borne in mind, as that of phthisis occurring in persons in whose families there was no hereditary diathesis. Some children, in whom the sterno-vertebral diameter was too short, were almost predisposed to suffer from phthisis in later life, although there was no tuberculosis or phthisis in other members of the family. Again, there may have been no phthisis in a family for generations, but there was syphilis, and a baby born under such circumstances was liable to have glandular swellings, as of the bronchial and tracheal glands, which gave rise to a cough by irritation of the mucous membrane of the bronchi, with which they were intimately related, and the final result might be phthisis. Measles and whooping-cough were frequently accompanied by broncho-pneumonia, and tuberculosis or phthisis, or both, made their appearance. The facts thus far brought forward were not sufficient to convince him that the bacillus must be in every case present as the cause of phthisis. The view that tuberculosis and phthisis were one had an important bearing upon the treatment. It was true that in some cases a vicious constitution must be attended to; but in a large number of cases preventive treatment was entirely local. He did not believe that morbilli and whooping-cough should be left to themselves simply because they were self-limited diseases, since if they were allowed to run their full course there would be opportunity for broncho-pneumonia to develop. It was also an interesting fact that tuberculosis and phthisis were seen at different periods of life,—phthisis with or without tuberculosis in later life, and tuberculosis in early infancy. Beneke had found that the pulmonary artery in the infant was very much larger than the aorta. This relation between the two vessels changed after some years. Relatively the right heart was more powerful than the left at this early age. These facts might go to explain why the lungs of babies

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were so much more liable to œdema and to the development of catarrhal processes than were the lungs of adults. These facts should be studied as much as the bacillus question, and they might prove productive of as good results.

Dr. W. H. WELCH thought Dr. Satterthwaite's paper showed that recent investigations tended to establish the fact that pulmonary phthisis was essentially tuberculosis. Niemeyer's doctrine that tuberculosis plays a comparatively unimportant rôle in phthisis, that catarrhal pneumonia undergoes caseous degeneration, and so produces phthisis, at present receives but little support from histological and pathological investigations. Both histological and etiological investigations, conducted independently of each other, led to the conclusion that phthisis was essentially tubercular in character. He entertained the same views that Dr. Delafield had expressed regarding the morphological changes, and believed that miliary tubercle was the most important anatomical criterion of the tubercular affection. Within the last few years histological observations had shown that the diffuse changes which occur in phthisis are as much tubercular in character as are the miliary tubercles. What was known as caseous pneumonia, or scrofulous pneumonia, etc., had been determined to be the special result of the tubercular process; and that it presented histological structures which allied it to miliary tubercle was, he thought, an established fact. He believed that the inoculability of tuberculosis had been established. His observations concerning the bacillus of tuberculosis had been confined mostly to the sputa of pathological patients, and he had been surprised at the uniformity with which the bacillus was found, but he had not always found it in the lung-tissue itself. He did not think the clinical facts which had been brought forward in opposition to the infectious theory of phthisis were of sufficient weight to justify us in discarding the exact experiments and observations of Koch and others. With regard to the question of heredity, it should be remembered that phthisis itself was not inherited. That which was inherited was only a lack of resistance to the special poison of the disease. Certain persons, such as Dr. Jacobi had mentioned, possessed a less degree of immunity against phthisis than others. The same was true regarding typhus fever and other diseases. The multiple forms of phthisis had been regarded as a strong objection to the opinion that tuberculosis and phthisis were identical; but it should be remembered that a regular succession of events was frequently absent in other affections, as in syphilis. This was also true of experiments regarding inoculability.

Dr. SATTERTHWAITE was surprised that there was such uniformity of opinion upon the subject of tuberculosis, for five or six years ago nearly all entertained different opinions from those which had just been set forth, and believed that miliary tubercle was a distinct disease from the catarrhal phthisis of Niemeyer. It was an important fact that those gentlemen who took what might be called the histological side of the subject were, it seemed, unanimously of opinion that tubercle was an inflammatory product. Regarding the question "Is Phthisis always Tuberculosis?" he thought possibly he would not take so strong ground as Dr. Welch had taken. He was not quite sure that phthisis was always tubercular. He had been told by competent observers that a pneumonia occurred in the colored race which went on to a caseous change without being associated with tubercle. Niemeyer had put us astray by claiming that tubercle was always preceded by caseous pneumonia or by some deposit of caseous matter in the body. This was incorrect, for miliary tuberculosis was found without pneumonia, and in some other cases most careful search for caseous deposits in other parts of the body failed to reveal any. With advancements made in the study of tubercle, corresponding advancements had been made in the study of scrofula. Scrofulous disease of the glands was now classed under the head of tuberculous changes. Perhaps we should so class those sluggish forms of disease in which the lymphatic glands become enlarged, the bones become involved, and inflammations of the mucous membranes and skin manifest themselves. He was of opinion that the direct influence of contagion was slight in comparison with the hereditary taint.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

A CONVERSATIONAL meeting of the Society was held at the hall of the Society, September 27, 1882.

DISCUSSION ON ABNORMAL OBSTETRICAL PRESENTATIONS.

Dr. D. M. Barr thought the subject of placenta prævia was a most important one, it being a matter of life and death to mother and babe, depending largely upon the prompt presence of the medical attendant.

He recalled the care with which Dr. Ellwood Wilson dwelt in his lectures upon the management of these cases throughout gestation as well as at the period of labor. It was always advisable for the attending physician to arrange with a brother practitioner living within easy reach, so that any emergency might receive prompt attention. He detailed a case in which, owing to his late arrival, severe hemorrhage had occurred; the placenta was already detached, except a portion still adherent to one side of the cervix: this was promptly separated, and the child expelled in a few minutes, and the hemorrhage arrested, but so severe had been the

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bleeding that the patient was almost bloodless, and in a fainting condition. There was no one in the house but himself and patient, and neither time nor means to obtain remedies. Pressure was made upon the abdominal aorta, with a view to retain blood in the upper portions of the body, with, he thinks, good effect, and patient speedily reacted.

In the anæsthetic recommended by Dr. Taylor, he thought the proportion of chloroform too large: he preferred one part of chloroform, three of ether, and two of alcohol. Such a mixture causes no nausea, relieves the pain promptly, with less profound anæsthesia, less liability to hemorrhage, and with consequently greater safety.

Dr. Montgomery agreed with Dr. Smith as to the great benefit derived from abdominal palpation. Were this procedure in all cases the rule of practice rather than the exception, many cases of malposition would be determined prior to the inception of labor long before they can be disclosed by vaginal examination, and the condition rectified, or the practitioner prepared for the imminent danger to mother or child.

In all cases of doubt it should be practised in addition to the vaginal exploration, as it will throw much light upon the position of the fœtus. Thus, in occipito-posterior positions the feet and limbs will be felt through the abdominal walls on either side of the median line; in occipito-anterior, the back of the fœtus can be outlined and the heart-sounds heard below the umbilicus on either side. In breech presentations the hard, resisting head is felt high up, and the heart-sounds are distinguished above the umbilicus. Transverse presentations are as easily determined.

In one case, three weeks before delivery he was able to foretell the birth of twins by distinguishing two heads through the thin abdominal walls.

Of vaginal exploration and abdominal palpation, the latter is capable of affording us the more satisfactory information.

Dr. McFerran said that if the views of Dr. Smith opposing an attempt to change the position of the head from a posterior to an anterior one were correct, it raised the question of the utility of a circumstantial and close diagnosis, and any law like that said to be proposed by Tarnier in France would be a useless refinement. In estimating the value of the procedure advocated by the author of the paper, the personal advantage of small hands should not be lost sight of, for in obstetrical operations no equality exists between the use of the finger and hand. He who can gain access to the part with the hand may accomplish that which seems impossible to those who, from the nature of things, never had any experience in the matter. Such being the case, it was easy to believe that the author of the paper had been successful in the mode of procedure, and others, equally skilful, have failed.

Dr. W. S. Stewart inquired if Dr. Smith had ever used the hot-water douche with success in placenta prævia. He would not like to try it, on account of endangering the life of the fœtus. He could not condemn the tampon when there was no escape of the liquor amnii. He had treated successfully by the tampon saturated in a solution of Monsel's salt, and also with equal success by injections of a strong solution of the salt given repeatedly as the necessities of the case might require. He would also indorse the reference made by Dr. Smith to palpation and auscultation as a very valuable method in diagnosticating the position of the fœtus in utero, which the author of the paper omitted to mention.

Dr. Dunmire had found great difficulty sometimes in changing the position of the head by manipulation. Though frequently succeeding, he had in one case of face presentation failed to bring the vertex down. The membranes had ruptured, the chin to the right, afterwards rotating into the hollow of the sacrum. Applied the forceps and delivered the child. It gasped twice, and died. He had successfully managed a case of prolapse of the cord by keeping it up for two hours with his hand until a pain brought down the child's head, engaging it so as to shut the cord out of the way of danger.

Dr. Toboldt had found little difficulty in changing the position of the head. In one case he had changed the position of head while the os uteri was pretty well dilated, after which a single pain expelled the child. He had also changed the position by external manipulation. He had used injections of Monsel's salt to control hemorrhage, and had no fear of using it even at full term.

Dr. Chestnut detailed the case of a patient with placenta prævia who had lost much blood and had been in labor for some time. He employed a method of treatment which he had not heard mentioned in the discussion. He had forcibly dilated the os uteri (which at the time was about the size of a quarter dollar), using at first his fingers, and then forced the index finger, and after it the hand, directly through the body of the placenta, ruptured the membranes, turned the child, and, using it as a dilator of the os, brought it down and delivered it. The placental mass was then removed. Some bleeding occurred, but not much. The case ended well. He referred to the case partly that the method might be criticised, in view of the consideration that, whilst it gave the greatest safety to the mother, it afforded least hope to the child. In the case cited, he believed the child to be dead.

Dr. William T. Taylor, in closing the discussion, said that he fully approved of Dr. A. H. Smith's remarks about abdominal palpation; but, although it would be a satisfaction to know if it is a twin pregnancy, or that a head or a breech will present, yet when labor

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begins, the management of the case must be as has been described.

The cases in which the head was delayed are those of "retarded dilatation of the os."

With regard to the danger of turning the body from a posterior to an anterior position, he could not recollect that any accident had occurred from it in his hands.

Dr. Smith had said that "nature never rotates above the brim of the pelvis, and therefore the accoucheur should not try to do so." But to that he would answer that we may expedite and aid nature, much to the advantage of the patient. He had detailed cases (in a former paper read before the Society) in which labor had been shortened by such expedients.

In regard to the danger of internal hemorrhage in using the tampon, he thought that the attentive physician would soon notice the signs of such a condition, the weak pulse, pallid lips, gasping breath, etc., and he would give restoratives and remove the tampon; but he had never had such unfavorable result in his own use of the tampon. He would hesitate to use the hot douche, being somewhat afraid of it.

How Dr. Barr could compress the abdominal aorta in cases of placenta prævia, when the uterus contained a child, he could not understand.

In Dr. Dunmire's case, the chin was probably below the promontory of the sacrum, and the forceps were the only remedy.

In his paper he had referred to the dilatation method of which Dr. Chestnut had spoken.

REVIEWS AND BOOK NOTICES.

TRANSACTIONS OF THE AMERICAN GYNÆCOLOGICAL SOCIETY. VOL. VI. FOR THE YEAR 1881–82. Philadelphia, Henry C. Lea's Son & Co., 1882.

Dr. Byford, in his introductory, claims for gynæcology the distinction of an "associate branch of medicine," placing it upon the same footing as surgery and practice, and considering it as "more comprehensive than either." He adds, "The restricted appellation of specialty cannot be applied to it as it now stands." So that at one fell swoop, as it were, the dragon of gynæcology has swallowed up all branches of medicine, and sits glaring defiance at our noble profession.

Dr. Byford's address would serve as a model for the ideal Fourth-of-July orator, and he lays aside his eagle's pinions only when urging the propriety of perpetuating in some way the memory of Ephraim McDowell, the father of ovariotomy. He suggests a fund for annual prizes and lectures, to be raised by a novel plan, each ovariotomist contributing five or ten dollars out of his fee for each ovariotomy. This, he says, "would not bear heavily on the operator." Oh, no! Our own idea, looking at this vast, inexhaustible field from which contributions can be drawn, and the magnitude of the sum that could easily be raised, would be to erect a McDowell monument: it is more American, —*i.e.*, if it is crude and unfinished. It could be immensely high, and the bronze casting, representing Ephraim holding aloft the successfully-removed specimen, would therefore be so distant that it would be less likely to "bring a blush to the cheeks of the young person," if the young person be not by the time it is finished so generally spayed as to be beyond blushing.

Dr. Samuel C. Busey's paper on acute hyperæsthesia of the peritoneum, etc., elicited in discussion a decided opinion against a loose method of naming pathological conditions, one speaker acknowledging that gynæcology is "becoming very much burdened by new terms."

Dr. Henry J. Garrigues read a paper on exploratory puncture of the abdomen, based upon ninety-four cases, both "operative and tapped." Of "Drysdale's corpuscles" he says, "they are not only not pathognomonic of ovarian cysts, but they do not even prove that the fluid examined has been taken from any kind of cyst." The result Dr. Garrigues arrives at is "that there is no pathognomonic morphological element in the fluid of ovarian cysts," but that generally he is "able, by mere examination, to distinguish an ovarian fluid from any other."

Dr. G. H. Lyman's paper is upon "Pelvic Effusion resulting in Abscess," and is based upon one hundred and forty-six cases, observed in the Boston City Hospital, between 1875 and 1880. He advocates early puncture.

The paper entitled "Genital Renovation by Kolpostenotomy and Kolpoecpetasis in Urinary and Fecal Fistules," is by Nathan Bozeman, M.D. It presents us in its first pages with the spectacle of the birth of a new word, for, following the example of the ophthalmologist, the gynæcologist is now striving to bar the entrance to his specialty with mighty names. The reader of this paper must encounter and overcome cystostellosis, kolpokleisis, kolpostenotomy, kolpoecpetasis, kolpostenosis; and when there are thrown in a few other big words from outside sources, as pyonephrosis, etc., it is still more bewildering. Hysterocystokleisis is a good word, if it stops growing now. Then we have hysterokleidic, episiokleisis, anakainosis. "Some may object," the writer says, "to the introduction of so many new words;" but the introduction is a small matter: the difficulty is in recognizing them the next time one meets them in literary circles.

Dr. Ely Van de Warter's paper is upon "Forcible Elongation of Pelvic Adhesions." It elicited much adverse opinion in discussion.

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Dr. Isaac E. Taylor contributes an article on "Lupus or Esthiomène of the Vulvo-Anal Region."

Dr. Goodell's paper on "Bursting Cysts of the Abdominal Cavity," apart from its technical interest, shows how a tumor may be discovered by one observer, and in a day be pronounced a "phantom" by another equally good observer, and incidentally the author throws some side-light upon the nature of those reported cases of menstruation and conception after the supposed removal of both ovaries, which have passed so long in the character of "stubborn facts."

"Erysipelas in Childbed without Puerperal Fever" is the title of Dr. Henry F. Campbell's paper, and, while based upon an isolated experience on his part, we fancy it can be duplicated by many a general practitioner: its discussion puts on record the opinion of the members of the Society in an exceedingly valuable way.

"Expansion of the Bladder over the Surface of Abdominal Tumors, and its Attachment to Them or to the Abdominal Walls as a Complication of Laparotomy," by T. Gaillard Thomas, M.D., will excite especial interest with the operator, rather than with the general professional reader.

"Fibroid Polypus, with Partial Inversion of the Uterus, with Specimen," by Thaddeus A. Reamy, M.D., is a useful paper for the embryo operators in this specialty, or—pardon us—in this main branch of medical science, which includes the trunk and all the foliage and roots.

Dr. Albert H. Smith, of Philadelphia, read a paper on "Axis Traction with the Obstetric Forceps." The ideas advanced by Dr. Smith are generally familiar to the profession in Philadelphia, having been taught by him for many years.

The remaining papers are on "Measurements of the Uterine Cavity in Childbed," by Dr. A. D. Sinclair; "Jaundice in Pregnancy," by Dr. J. W. Underhill; and "The Practice of Gynæcology in Ancient Times," by Dr. Ed. W. Jenks. This paper makes us almost certain that it was, as has been suspected, a good thing for the world when the lamented Alexandrian Library was destroyed. There were too many books, and there was too little in them. There will be need of a similar accident again before long, to clear the medico-literary atmosphere and free men's minds from overweighting. The dark ages are bewailed as so much time lost, while they were really only the reaction after reading the innumerable Alexandrian volumes, the lethargic sleep of a world mentally gorged with indigestible ideas, from which humanity arose refreshed and entered with vigor on the race of modern times. Aetius, who spent his life in study at Alexandria, who used the library and undoubtedly extracted all he could from it one hundred and fifty years before its destruction, and whose works are extant, seems to have made a very moderate "find." The ancients, however, had uterine specula, Dr. Jenks informs us, and sponge tents, but, alas! they had no carbolic spray, and, in short, Dr. Jenks's paper only goes to prove that were all the lost wisdom of antiquity restored to us it would be found to-day of no value whatever.

The volume concludes with six papers by candidates elected to fellowship, and valuable indices of gynæcologic and obstetric literature.

E. W. W.

GLEANINGS FROM EXCHANGES.

ARSENICAL POISONING—UNUSUAL POST-MORTEM APPEARANCES.—Dr. A. R. Davidson reports the following in the *Buffalo Medical and Surgical Journal* (October, 1882):

"Where the arsenic has been taken with food, it occasionally happens that death may occur from its effects, and neither the stomach nor intestines present an abnormal appearance. Evidence of poisoning upon post-mortem examination would be here entirely wanting. Such cases are undoubtedly very rare; but the possibility of their occurrence is not to be overlooked, as they teach the important fact in legal medicine that the non-existence of striking changes in the alimentary canal after death is no proof that the party has not died from the effects of an irritant poison. It is for this reason that I report the following case:

"August 24, 1882, several biscuits were placed in my hands by one of the coroners of Erie County for analysis. Upon examination they were found to contain a quantity of arsenic equal to about sixteen grains in each biscuit. A portion of a family—mother and three children—had partaken of the biscuit quite freely at their evening meal, and had all been violently sick with the well-known and characteristic symptoms due to the poison. After twelve hours, one of the children, a boy of six years, died. Eight days after, the body was exhumed in my presence; the stomach, kidneys, and liver removed; the rectum was opened, and found to be free from all indications of inflammation.

"The stomach contained a very little whitish fluid, and, upon inspection, the mucous membrane was found to be paler than normal, and absolutely free from any semblance of inflammatory action. An analysis proved it to contain a mere trace of arsenic.

"The liver and kidneys, treated by Fresenius and Von Babo's method, yielded a little more than half a grain of arsenious acid.

"The explanation of these exceptional cases, and of the common ones of recovery after large quantities of poison have been taken with food, is doubtless that the food so

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envelops the poison that it is prevented from attaching itself to the mucous membrane; and when emesis occurs, the arsenic may be entirely thrown off with the contents of the stomach. The amount absorbed before its emetic action is evoked is frequently insufficient to produce death. While a part of the poison is rapidly eliminated by the kidneys, another part seems to be temporarily deposited in the liver, and thereby withdrawn from the circulation. From the observations of the late Dr. Geohegan, it appears that the deposit of arsenic in the liver rapidly increases up to about fifteen hours after the poison has been taken, when that organ may contain as much as two grains of arsenic. If the person survives, it then very gradually diminishes in quantity, and entirely disappears in from fourteen to seventeen days."

POISONING BY DAPHNE MEZEREON.—Dr. Shaw reports the following in the *British Medical Journal:* "On July 14 last, a little girl aged two and one-half years was brought to me by her father, who said that about half an hour previously she had eaten some red berries from a shrub in front of the house which he believed to be poisonous, and he thereupon produced some berries and leaves of the ordinary cultivated mezereon. The child had been sick on the road, but had not vomited much. No one knew how many berries she might have swallowed, for she had been alone for ten minutes, and her hands were full when discovered. There was nothing remarkable in her appearance, except that she seemed somewhat dull and stupid. I gave her an emetic of five grains of sulphate of zinc in a little warm water, which made her very sick, but brought nothing up but a clear liquid. I then gave her some ipecacuanha wine, and sent her home, with instructions for her to have a dose of castor oil after the emetic had acted. She was again sick, with the same result as before, and they had barely reached home (a ten minutes' walk) when she suddenly became pale, and began to cry and shiver violently, and very soon became unconscious. I was hastily summoned by a messenger, saying that she was dying, and on my arrival I found her lying quite still and motionless, her eyes wide open, pupils fixed and dilated, face blue, scarcely any pulse perceptible, and breathing very faint and slow. I had her wrapped in a warm blanket, gave her some ammonia and brandy, and ordered a mustard poultice to be put on her chest. She could only be roused with great difficulty, and her skin seemed quite insensible to touch. She revived a little after the stimulant, and moved her legs and arms about; the pulse also became quite distinct at the wrist. The mother noticed now, for the first time, that the lips looked as though they had been burnt, and that the inside of the mouth was swollen. She remained in this condition for an hour, when she began to look about and put her hands to her chest, where the mustard had been. The pupils still remained quite indifferent to light. Two hours later the bowels acted violently, and a copious motion was passed, containing half-digested food, something like curdled milk, and a number of small hard seeds, some of which were partly enveloped in pulp. After carefully straining a portion, I found twenty-four of these, and I believe there were fully as many more in the remainder. The child still continued drowsy, though otherwise better. I now gave a dose of castor oil, and left. There was afterwards another evacuation, and a few more seeds were seen. She continued to improve, sleeping heavily all the following morning, and in the evening had apparently forgotten all about it.

"The quick passage of the poison through the stomach into the intestines was, I think, unquestionably the secret of recovery in this patient. I am not aware of any case having been recorded where so large a number of berries had been taken without a fatal result. Most writers seem to agree that very few are sufficient to cause death. Guy and Ferrier say from six to eight, and Orfila mentions a case, on the authority of Linnæus, where a young lady suffering from intermittent fever had died, 'spitting blood, after twelve berries had been given for the purpose of purging her' ('On Poisons,' vol. ii. p. 27, second edition). The narcotic symptoms, which were so marked a feature, are disputed by some authorities, who place daphne with the simple vegetable irritants, although Christison, in his work on 'Poisons' (fourth edition, page 601), quotes one instance where, amongst several children who died with symptoms of violent vomiting and purging, one was distinctly narcotized."

THE USE OF BELLADONNA IN SYNCOPE AND CARDIAC FAILURE.—In a communication on "Some Medical and Surgical Uses of Belladonna or its Alkaloid," Dr. J. H. Whelan calls attention to the physiological fact that belladonna has the power of doing away with the inhibitory action of the vagus on the heart, and insists that syncopic attacks are in the main caused by reflex cardio-inhibition. In surgery, atropia given prior to chloroform anæsthesia is, therefore, of great service in preventing heart-failure; also in shock, threatened collapse, etc.

"In medicine there are many cases in which belladonna or its alkaloid would prove useful. In some extreme cases of hysteria or allied disorders we have patients going from one faint into another, frequent syncopic attacks. In the allied abnormal condition of pregnancy—that called by old authors hypothæmia—we have the same condition. In both this drug ought to prove extremely use-

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ful. In the former we have impulses originating probably in the higher centres, causing frequent inhibitions; in the latter, the less noble organ, the uterus, takes the place of the brain. In certain apparently asthenic inflammations, particularly in peritonitis, a very weak pulse is a common thing. One would imagine that this, which is fast, could in no way be connected with the so-called cardio-inhibitory mechanism; but it is just possible that it might. The inhibitory fibres, being acted on slowly and gradually, become in part exhausted, while the 'accelerator' nerves might develop into action."

He also states that "belladonna is sometimes serviceable in annoying nocturnal emissions. It will be found very useful, indeed, if the emissions be accompanied with erections, but perfectly useless if they be not so accompanied. This is in keeping with Nicolski's results, that atropine paralyzes the 'dilator' fibres of the nervi erigentes, while muscarine produces erection apparently by stimulating the local dilator mechanism, thus resembling what appertains to the heart. When, therefore, we have a case of excessive nocturnal emissions with erections, minute doses of belladonna and bromide of potassium will speedily effect a cure when exhibited at bedtime.

"Dr. Gentilhomme, of Reims, I see by the late journals, has employed a pill containing one-hundredth of a grain of sulphate of atropine in a patient suffering from coryza, and very subject to it, with very excellent results. Fifteen minutes after the first administration all sneezing had ceased, the secretion stopped, and respiration became normal. Eventually the attacks diminished, and finally disappeared under its influence. If Gentilhomme's conclusions turn out correct, there will be a very decided improvement made in the treatment of catarrh. Dr. G. Johnson's treatment by full doses of opium invariably gives rise to unpleasant sequential symptoms, while Jupes Styrap's frequent minute doses with antimony are very depressing, to which I can bear personal testimony."—*Lancet.*

REVIVAL OF BLOOD-LETTING AS A THERAPEUTIC RESOURCE.—In the Paris letter to the *Lancet*, the views of two of the most prominent practitioners of that city with regard to blood-letting are referred to as follows: "Professor Peter, who was one of Trousseau's most fervent disciples, and present editor of his clinical work, employs venesection on rather a large scale, particularly in cases of apoplexy and epilepsy, in which Professor Trousseau condemned it altogether. At his clinical meetings, and in his lectures at the School of Medicine, Prof. Peter teaches that, with all deference to his former master, he has found by experience that blood-letting, if judiciously employed, is invaluable in some cases, and apoplexy is just one of those in which it would be found useful. As in the days before the publication of Professor Trousseau's clinical works, Professor Peter practises blood letting at the moment of the attack, with the hope of cutting it short, and he does so at a later stage with the view of facilitating the reabsorption of the clot of blood formed at the seat of the lesion, and to moderate the congestion in its neighborhood. On the strength of this theory, Professor Peter, at his clinic, lately bled a patient who was upwards of sixty for an attack of apoplexy and hemiplegia of the left side, and he declared, at a meeting of the Medical Society, that this bleeding had been the means of saving the patient from imminent death. He employs general depletion even in the convulsions following apoplexy, with great benefit to the patient, as he had noticed that, notwithstanding the presence of a large quantity of albumen in the urine, the convulsions and the albumen had entirely disappeared after a small bleeding from the arm. Professor Vulpian employs blood-letting in its various forms in all cases of inflammation, and he has found it invaluable in peritonitis, whether from puerperal or other causes. At the Clinique d'Accouchement, Professor Depaul scarcely employs anything else in puerperal convulsions. He bleeds the patients largely and repeatedly until the most urgent symptoms are relieved, and he has frequently stated at the Academy of Medicine and at other medical societies that the results of the practice that he has carried out for more than a quarter of a century can bear comparison with any other method of treatment adopted by other physicians in similar cases: in fact, the mortality among his patients has always been considerably less."

ON A PECULIAR REDUCING SUBSTANCE IN THE URINE FROM THE INTERNAL EMPLOYMENT OF TURPENTINE.—From the researches of M. Vetlesen, in the Physiological Institute of Christiania, published in the *Nordiskt Medicinskt Arkiv* for 1882, it appears that during the internal employment of turpentine the urine contains a rather large quantity of a reducing substance, which in its reactions (such as blackening, on boiling, an alkaline solution of oxide of bismuth, and reducing the peroxide of copper to the suboxide) seems to be composed in great part of a matter strongly resembling grape-sugar, without, however, being in any way identical with it. The author, in fact, has never succeeded with the polarizing apparatus in observing the rotation to the right side. The reaction disappears after fermentation, which process appears to act more slowly. Experiments subsequently showed that a small quantity of hydrochloric acid destroyed this reducing substance even at a relatively low temperature, while under the same circumstances it was proved that grape-sugar is only slightly destroyed. The reducing substance described

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by M. Vetlesen is, in all probability, optically indifferent; it disappears by fermentation with rather more difficulty than grape-sugar; but, as it does so when the urine is simply left to rest for about five days, it might perhaps be supposed that it is not a fermentable body. But M. Otto has traced in one experiment, and after fermentation, some alcohol in the distilled product, while before fermentation the urine gave only a negative result. It may be admitted as the result of the experiment that the substance appearing in the urine during the internal use of turpentine is a kind of fermentable sugar, the nature of which, however, is not yet specially determined. The researches made appear to show that the quantity of this reducing substance is in relation to the amount of the dose of turpentine, and that it diminishes if the use of this drug be continued for a certain time. —*Medical Times and Gazette.*

CEREBRAL TUMOR—AUTOPSY—ENDOTHELIOMA.—Under the care of Dr. Philipson.—J. M., aged 36, machinist, was admitted into the Newcastle-on-Tyne Infirmary, May 11, 1882, in a state of stupor, and complaining of pain at front and back of head. Patient could give very little account of himself. His friends stated that he had first complained of pain in the head four months previously, and that for the last three months he had been unable to work; also, that he had attacks of vomiting and giddiness from time to time. No history nor any signs of syphilis; nor at this time could any history of cranial injury be got, but after his death his friends admitted that he had had some injury to the head.

When admitted, patient was in a state of stupor. Memory appeared much affected. There was double internal strabismus, with unequal pupils; double optic neuritis. Hearing unaffected; sense of smell lost. Lies on back; stumbles on trying to walk. Is with difficulty got to answer questions; speech slow and hesitating; pain in head apparently increased by percussion in right frontal region.

From the sickness, headache, double optic neuritis, etc., Dr. Philipson diagnosed the presence of a cerebral tumor, probably situated in the frontal region.

May 20.—Patient still more torpid, bowels obstinately confined, can scarcely be got to take any food, pupils insensible to light. He died seven days later.

Post-mortem examination.—When the calvaria was removed, the membranes appeared normal. The right frontal bone had on its internal surface a much greater concavity than the left, and at its upper and outer part was rough, deeper in color, and thinned. The dura mater was very adherent towards the front of the longitudinal fissure, and over the right frontal lobe. The right frontal lobe was very hard to the touch, and was gray and mottled, and in all its diameters it was larger than was the left lobe. On section a new growth was discovered, which presented an almost fibrous resistance to the knife, and was found to occupy the whole of the right frontal lobe. It was grayish, with a ragged outline, and measured three inches in each diameter. It was surrounded by soft diffluent cerebral tissue; but all the rest of the brain was healthy. On microscopical examination the tumor was found to present all the characters of an endothelioma.—*Medical Times and Gazette.*

MODE OF VACCINATING.—Dr. Chas. F. Moore, in a short paper read before the British Medical Association, adopts the following method:

"With a perfectly clean sharp lancet, I make five or six single scarifications, holding the lancet as a pen is held, resting securely but gently on the arm of the person operated on, which I hold with the left hand. The operation, thus performed, scarcely occupies two seconds, and when done lightly, but sufficiently, does not waken a sleeping infant, nor cause a waking child to cry, provided the attention be diverted by gently stroking the arm, or otherwise engaging the attention. The lymph from the arm of another child, or preserved in tubes or on points, is then to be gently rubbed with the flat of the lancet or charged points across the little wounds, which may be made to gape by slight traction on the adjacent skin. It is neither necessary nor desirable to make the incisions at all deep; and, if the appearance of a little blood do not speedily occur, getting the parent to gently 'hoist' the child, which does not waken a sleeping infant, will generally give the circulation sufficient impetus to cause a slight but sufficient evidence that the cutis was reached by the incisions.

"The result of this mode of operating I have found to be one or more, usually two, separate vesicles, or an oblong compound one at the site of each pair of scratches, and one at the site of the single scratch, or more if six were made in all, or if they were made longer than usual."—*British Medical Journal.*

BLUE MARKS AND PEDICULI.—Some years ago the fact that blue spots or dusky spots are often observed in association with pediculi pubis was pointed out by M. Mourson, a French naval surgeon. Subsequently M. Duguet furnished a demonstration of the relation between the two by producing blue spots by means of inserting beneath the epidermis a small quantity of a sort of paste made of bruised pediculi. Hence it is clear that the pediculi pubis contain some substance having coloring properties. Further observations by M. Mallet, a pupil of Duguet, make it probable that this substance is contained in the salivary glands. By means of fine forceps

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the head of a pediculus was torn off and inserted beneath the epidermis of the forearm, and near it the rest of the louse was similarly interred. Next day a blue mark was distinct around the body of the insect, but not around the head. In another experiment a small mass came away from the body of the insect with the head, and in this case the dusky spot developed around the head and not around the body. Further experiments showed that the coloring agent was situated in the body opposite the anterior pair of legs, and at this level it is known that there are two pairs of salivary glands. M. Duguet has pointed out some curious facts regarding the resistance of some persons to the action of the salivary juice and the influence of season on the coloring power of the insect. The blue spots are far more abundant in February, March, and April than in other months.—*Lancet.*

SILVESTER'S METHOD IN DROWNING AT PARIS.—Dr. A. Voisin communicated to the Rochelle Congress (*Gaz. des Hôp.*, September 5), the satisfactory results which have attended the great efforts made for some years past by the Paris Municipality to improve the treatment of drowned persons in that capital,—efforts which Dr. Voisin has been the chief instrument in carrying out. He now reports the results which have been obtained: 1. The almost absolute certainty of restoring life to persons who have remained under water, or "between two waters," for a period varying from a few seconds to five minutes, no one formerly having been saved after three minutes' submersion. 2. He has succeeded in restoring to life persons who have remained under water from five to twenty minutes. 3. These results have been obtained in individuals not merely in a state of syncope, but in an asphyxiated state, as shown by their violaceous face and lips, their open mouth, and flaccid masseters. 4. These results have been gained in consequence of the excellent arrangements made for the rigorous carrying out of Silvester's method; the effectual application of warmth to the whole surface of the body by calorific generators; the ready access to warm baths and cold douches; the keeping the patient quietly in bed for some hours after his restoration; the whole system being administered by a well-trained and disciplined staff, which is kept in constant readiness.—*Medical Times and Gazette.*

ON THE TREATMENT OF CONTRACTED FINGERS.—A powerful man some months ago scratched his little finger with a meat-bone. The usual train of symptoms followed, and when I saw him the tip of the little finger was so tightly approximated to the palm that no force could separate it, and strong fibrous bands corresponding with the primary flexures were readily observed; and, as I thought the tendon was uninvolved and still ran in a tolerably free theca, I divided the bands with a Von Graefe's iridectomy-knife, which is singularly useful for fine plastic work, and extended the fingers forcibly. No good came of this proceeding. I subsequently placed him under an anæsthetic, and carefully and thoroughly extirpated the entire cicatricial tissues, and divided the tendon, with antiseptic precautions. The finger was carefully retained in the straight position, a metal circlet was made for the wrist, and a piece of stout steel clock-spring welded on to it. This steel spring was carried up the dorsum of the finger and suitably attached to it. By its tension it effectually kept the parts on the stretch, and, when the wound had healed, passive and active movements, conducted by the patient himself, brought about an excellent result. The finger is as straight as the others, and will be, no doubt, ultimately quite as useful.—EDWARD BELLAMY, in *The Lancet.*

PROF. VERNEUIL ON TRANSFUSION.—During a discussion on this subject at the meeting of the Association Française, at Rochelle (*Gaz. Hebd.*, September 2), Prof. Verneuil expressed his opinion that transfusion is often a very difficult and dangerous operation, and almost always a useless one. In place of occupying ourselves with the mechanical procedures of the operation, it would be better to consider its physiological pathology, its indications, and its contra-indications. It is not always followed by death, and in some cases it seems even to have saved the patient; but fortunate results are only observed when a very small quantity of blood has been injected. It is not by its globules, by the elements of nutrition which it furnishes to the tissues, that injected blood acts, but by a general dynamic reaction which it induces by its contact with the endothelium of the vascular system. Ether injected into the cellular tissue produces the same reaction, arousing the exhausted organic forces. In presence of the difficulty of the operation, and the defects of the apparatus in use, Prof. Verneuil prefers the ether injections, all the more as he does not believe that there exists a case on record proving that transfusion has succeeded where all other means have failed.—*Medical Times and Gazette.*

FATAL POISONING BY ERGOT.—A hospital nurse, 28 years of age, five months pregnant, took a quantity of powdered ergot ("two handfuls"), to produce abortion. She had for several months previously taken the fluid extract, but without effect. The symptoms produced by the powder, taken dry and not infused, were vomiting of reddish-brown, pultaceous matter; the lips, and the base and middle of the tongue, were swollen and covered with dry black blood; the lips and edges of the tongue were darker-colored than normal,

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but moist. The skin was pale and cool, temperature in the axilla 96°, when seen about ten hours after taking the drug. The upper portion of the body was intensely jaundiced. Ecchymoses were seen under the eyes. Patient was in an apathetic condition, with stupor occasionally. She lay chiefly upon the right side. The pulse was peculiar: it was rapid, soft, and disappeared under slight pressure, so that it could not be counted. Respiration noisy and labored, forty-eight to the minute. The area and force of the cardiac pulsation were both increased, while the impulse against the chest-walls was rolling in character: it beat one hundred and fifty to the minute. There was congestion at base of right lung. The patient died from progressive asystole. At the autopsy numerous capillary hemorrhages were found in the various tissues and viscera, although none occurred in the brain. The stomach and abdominal cavity contained exuded blood; the lungs were anæmic, with the exception of minute hemorrhages and the right basic congestion; the heart was empty; the uterus contained a fœtus, but neither liquor amnii nor blood.—*Lancet.*

Syphilitic Polyuria.—There is, according to Professor Semmola, of Naples, a form of cerebral syphilis which may be the cause of polyuria.

The *Revista de Ciencias Médicas* of Barcelona speaks of three cases already reported by the doctor in favor of his opinion. In one of those cases (the most characteristic of all) the patient used to void forty-three pints of urine in twenty-four hours, with a specific gravity varying between 1001 and 1005. He had seen several physicians, but, feeling no relief from their treatment, he finally consulted Professor Semmola, who found out that the man was affected with a chronic syphilis, to which he attributed the cause of his disease; very probably some syphilitic lymph or deposit was locally effused into the walls of the fourth ventricle of the brain, and so had pathologically reproduced the celebrated physiological experiment of Claude Bernard,—that is, to produce polyuria and sugar in the urine of dogs by simply puncturing with a needle the floor of the fourth ventricle. Based upon this diagnosis, the patient was submitted to a general antisyphilitic treatment, which consisted in hypodermic injections of albuminate of mercury and the long-continued use of iodide of potassium. In two months he was perfectly cured.—*New Orleans Medical and Surgical Journal.*

Vaccinal Micrococci.—M. Strauss presented to a recent meeting of the Société de Biologie a series of microscopical preparations of the vaccinal pustule from the calf, at different stages of its progress, in which the presence of the special micrococcus could readily be observed. The method of preparation adopted was to place the excised fragments of skin in absolute alcohol, to cut sections and stain them by the method of Weigert, which consists in tinting with methylamine violet, and then discoloring them until only the nuclei, the bacteria, and the micrococci remained visible. Under a strong magnifying power the latter were visible as extremely minute points, tinted blue, about a thousandth part of a millimetre in diameter, and grouped in colonies. They were seen in the borders of the inoculation wound, and in the Malpighian layer, and subsequently could be traced passing into the subjacent cutis, especially in the lymphatic spaces. The multiplication and extension of the organism seemed to coincide closely with the development of the pustule.—*Lancet.*

Cysticercus, or Pork-Measle, in Man.—M. Troisier exhibited lately to the members of the Paris Hospital Medical Society a man 36 years old, a Parisian, who for a year past had noticed small swellings arise on the cheek, arms, legs, and abdominal walls. These swellings proved to be due to cysticerci, and, curiously enough, the patient had passed a tænia solium whilst bearing these larvæ in his body. M. Troisier suggested two hypothetical explanations of the coincidence,—either that the man had swallowed the ova of his own tape-worm, or that tape-worm and cysticerci were derived from the same external source. He asked what treatment should be followed to rid the patient of his disease. No one could dream of removing them one by one, but some such simple method as puncture with the hypodermic syringe might suffice to kill them. Many similar cases are referred to by Lancereaux in his work on "Pathological Anatomy," although they are not so frequent as the occurrence of solitary cysticerci in organs. Lancereaux gives a figure showing numerous subcutaneous cysts in a woman, and among other facts quotes the statement of Rudolphin to the effect that in his time, at Berlin, cysticerci were found in one out of every fifty post-mortem examinations, occurring most often in the gluteal, psoas, iliacus, and vasti muscles, and more rarely in the brain. Bonhomme, in one case, calculated that there were as many as two thousand lodged in the subcutaneous, subfacial, and intermuscular connective tissue.—*Lancet.*

Contagiousness of Phthisis.—Dr. Vincent Edwards, for seventeen years resident medical officer at Brompton Hospital for Consumptives, gives the following facts telling against the asserted contagiousness of consumption. Of fifty-nine resident medical assistants who lived in the hospital an average of six months each, only two are dead, and these not from phthisis. Three of the living are said to have phthisis. The chaplain and the matron had each lived there for over sixteen years. Very many nurses had been in

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residence for periods varying from months to several years. The head nurses, says the writer, sleep each in a room containing fifty patients. Two head nurses only are known to have died; one from apoplexy; the other head nurse was here seven months, was unhappily married, and some time afterwards died of phthisis. Of the nurses now in residence, one has been here twenty-four years, two twelve years, one eight years, one seven years, one six and a half years, and one five years. No under-nurse, as far as I am aware, has died of phthisis. All the physicians who have attended the in- and out-patients during the past seventeen years are living, except two, who did not die from phthisis.—*Medical Record.*

REDUPLICATION OF THE HEART-SOUNDS.—Dr. D'Espine has examined with the cardiograph a number of clinical patients in whom the heart-sounds were modified in various ways. He finds that reduplication of the first sound depends on the contraction of the ventricular region in two separate segments, but never on successive contraction of the two ventricles. Increased tension in the aorta seems to be an essential condition of the phenomenon of reduplication, but it is not by itself sufficient to produce the phenomenon. On the other hand, reduplication of the second sound is determined by the failure of the aortic and pulmonary sigmoid valves to close simultaneously. Double diastolic impulse occurs in two diseases: (1.) In aortic insufficiency with great regurgitation; it is then a bad symptom. (2.) In mitral insufficiency with stenosis and hypertrophy of the left auricle; it then depends on a secondary wave starting from the auricle, and is really a kind of premature præsystolic effect. —*Revue de Médecine; Practitioner.*

MISCELLANY.

ECONOMICAL SOAP.—The properties of soap and of silicate of soda possess great analogy. The combinations of weak acids possess a slightly alkaline reaction, their solutions being capable of forming an emulsion with fatty substances. These properties in common have led to the manufacture of cheap soaps, containing a large proportion of silicate of soda or soluble glass. Two processes may be employed: (1) the addition of a concentrated solution of silicate of soda to fatty or resinous soap, and (2) the saponification of fatty or resinous substances by alkaloids in the presence of silicate of soda. By either method a soap is obtained, suitable for all the uses to which ordinary soap has hitherto been applied, and at a much lower price, as silicate of soda is extremely cheap.—*Boston Journal of Chemistry.*

BACILLUS GYNOPHILIA.—The origin of this dread disease, commonly known under the title of "love of the opposite sex," has recently been discovered by a California physician (*Washington Post*) to be a bacillus. This has been cultivated, and certain persons inoculated with it, with the following results. The inoculation was invariably successful, symptoms of the disease appearing in a very short time after the operation. A bachelor, an inveterate woman-hater, aged fifty, the first day after inoculation had his whiskers dyed, ordered a new suit of clothes and a set of false teeth, bought a top-buggy, a bottle of hair restorer, a diamond ring, and a guitar, and began reading Byron's poems. The inoculation produced symptoms of the same nature in a young lady of forty-five. She spent five dollars at a drug-store for cosmetics, bought a lot of new hair and a croquet set, sang "Empty is the Cradle," sent out invitations for a party, and complained that the young men did not go into society.—*American Medical Weekly.*

GLYCERIN AND GLUE.—A German chemist named Puscher, a native of Nuremberg, reported to the trades-union of that place that he met with great success in using glycerin together with glue. While generally, after the drying of the glue, the thing to which it is applied is liable to break, tear, or spring off, if a quantity of glycerin equal to a quarter of the quantity of glue be mixed together, that defect will entirely disappear. Puscher also made use of this glue for lining leather, for making globe-frames, and for smoothing parchment and chalk paper. He also used it for polishing, mixing wax with the glycerin, and using it as an underground for laying on aniline red color. The red was found to exceed all others in which glycerin is not used. The glycerin has also some properties in common with india-rubber, for it will blot out pencil-marks from paper, so as to leave no mark whatever. A paste made of starch, glycerin, and gypsum will maintain its plasticity and adhesiveness longer than any other cement, and therefore recommends itself for cementing chemical instruments and apparatus used by pharmacists.—*Boston Journal of Chemistry.*

DEATH IN THE DYEING.—According to a Vienna journal, a death has occurred in Warsaw in consequence of wearing cinnamon-colored underclothing. The dye faded under perspiration, and was partially absorbed by the skin, and poisonous matter contained in it caused death. The first symptoms were vertigo, bleeding from the mouth, and loss of sight. Physicians were unable to give relief, and the victim died in agony. He gave the name of the trader from whom he bought the underclothing in Vienna, and the Warsaw and Viennese police have been in communication about the occurrence. A solution of the dye given internally to a dog produced death in an hour.—*Sanitary Engineer.*

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MILK AS A VEHICLE FOR FEVER.—An outbreak of fever in the outskirts of Glasgow has been traced by the officers of health to a poisoned milk-supply. (*British Medical Journal* for September 23.) "It appears that this farm when visited was found to be in a very unsanitary condition, and in the farm-house itself one of the inmates had recently been suffering illness of a febrile character." By the way, what is the condition, hygienic or otherwise, of the sources from which our city milk comes? Has any one tried to find out?

GLACIALINE.—According to Dr. Besana, this substance, which has met with so much favor in England and elsewhere as an antiseptic, especially for the preservation of milk, meat, and other articles of food, has the following composition: boracic acid, 18 parts; borax, 9 parts; sugar, 9 parts; glycerin, 6 parts. A Roman composition of a similar kind was found to be nothing but pure boracic acid. It is called salt of glacialine, and sells at five francs per kilogram (about forty-five cents a pound), the market price of boracic acid being exactly half that rate.—*Boston Journal of Chemistry.*

THE majority of the cheap cigarettes contain more nicotine in proportion to the tobacco in them than does an ordinary cigar; one reason for this being that many of them are made from cigar-stumps which are carefully collected for this purpose, and these cigar-stumps are saturated with nicotine distilled into them by the slow combustion of the cigar.

A CASE involving some medico-legal points was recently tried in Chicago. A girl died from metro-peritonitis. A midwife was tried for causing her death by attempt to produce abortion. The necropsy showed that there had been apparently an attempt to produce abortion, but that the girl had never been pregnant.

THERE is eminent medical authority for the statement that unripe or very old potatoes contain a certain quantity of solanine. This may produce serious results, if the potatoes are boiled with their skins on, and if they are eaten in large quantities.—*Boston Journal of Chemistry.*

A DIFFERENCE WITH A DISTINCTION.—Alphonse Karr, talking of food adulteration, remarked, "It's very curious, isn't it? If I poison my grocer, the very lightest sentence will be hard labor for life; but if my grocer poisons me—ah, that's a different thing!—he is fined forty francs!"

CACODYLE.—At the Société de Biologie, Paris, Rabuteau announced that he had demonstrated properties analogous to curare, and that, in doses considerably elevated, the substance resembled the arsenical compounds in its physiological properties.—*Le Progrès Médical.*

FEMALE MEDICAL STUDENTS IN RUSSIA.—It is officially announced that, by order of the emperor, the admission of new pupils to the course of medical training for women at the Nicolai Military Hospital, in St. Petersburg, will be discontinued after the present term. The students will, however, be allowed to conclude their course, after which the clinical instruction for women at the hospital will be abolished. The educational appliances, library, etc., are to be handed over either to the Military Academy of Medicine or to any establishment that may be prepared to open courses of medical instruction for women.

EX UNO DISCE OMNES.—The *Chicago Medical Review* is responsible for the following: A Cyprian in Chicago fell into labor and was delivered by an accoucheur noted for his punctilious observance of all the requirements of the laws. In making out the return of the birth he was obliged to perform an impossibility,—*i.e.*, to state the name of the father of the child. When he came to this a bright thought struck him, so he escaped the quandary and satisfied his conscience and his patriotism by writing "E Pluribus Unum." For his services he should, and doubtless did, receive nothing less than an American eagle.

THE French minister of agriculture has placed the sum of 50,000 francs at the disposal of M. Pasteur for his scientific researches into the contagious diseases of animals. The illustrious *savant* had already received grants of 50,000 francs in 1880 and 40,000 francs in 1881.

PEDICULI CAPITIS.—A solution of hydrarg. chlorid. corrosiv. in dilute acetic acid (gr. ij to ℥j) destroys both pediculi and nits in one application. The use of warm water and soap subsequently obviates any danger from absorption of the mercury.

MR. J. T. CLOVER, the Lecturer on Anæsthetics at the University College Hospital, London, is dead.

A PARASITIC AFFECTION IN DIABETIC PATIENTS.—At the International Medical Congress, the late Prof. Simon called attention to an inflammation of the prepuce in diabetic patients due to the growth of (myceli-um) fungus in the mixture of sebum and diabetic urine retained in the preputial fold. In some cases this is the only symptom that the patient complains of. Possibly pruritus of the vulva in women may find in some cases a like explanation.

DEATH FROM PERFORATION OF THE ŒSOPHAGUS AND THORACIC AORTA.—In the *Wiener Med. Wochenschrift*, No. 35, Dr. Ludwig Klaar reports a fatal case of perforation of the œsophagus, due to a wood-shaving having become impacted in the gullet at the level of the bifurcation of the trachea. The thoracic aorta was eaten into, and this led to the man's death by profuse hemorrhage.

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FATE seems to come a long way to meet some victims. Mr. S. R. Aitken, of Columbo, Ceylon, was recently killed by a prescription for tape-worm taken from the seventh edition of "Medical Therapeutics," by George A. Napheys, M.D., edited by Dr. D. G. Brinton. The number of deaths indirectly produced by the half-culture and routine practice encouraged by such books finds no record.

THE St. Joseph Hospital Medical College and the College of Physicians and Surgeons of St. Joseph have united under the charter of the former, with the name of the St. Joseph Medical College.

THE Jewish doctors of the Russian army are being made the especial targets of official persecution.

OXYGENATED WATER is used in some of the Paris hospitals as an antiseptic surgical dressing.

NOTES AND QUERIES.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—The daily papers have informed the public that a member of the obstetric staff of Blockley has been removed for "performing an operation of a private nature before the class." I have understood that this was nothing more nor less than bringing an obstetric case into the amphitheatre. Now, while at the first glance it might seem to a layman a harsh and immodest proceeding, it would cease to seem so when he considered for a moment why it was done. While generally the more difficult surgical operations, no matter how suddenly demanded, fall into old and experienced hands, the most serious emergencies of childbirth may be thrust at any time upon the graduate of a day. In the long summer months Philadelphia is almost depleted of its older physicians, and the public are often forced to take any one who exhibits a sign. In the country the recent graduate may be the only medical man in a circuit of many miles. Now, it is a blessing to the community when every graduate possesses that practical knowledge, even of normal cases, which only actual observation can give. We venture to assert that the experience of one case will do more to remove nervousness in the beginner, and therefore give him calmer judgment, and make him a vastly safer man for his patient, than scores of purely didactic lectures; and the man who brings a case before the class has conferred on its members and on the public a boon whose value is inestimable. This is the great necessity of our schools, and this has been the point on which foreign schools excelled us, for not many years ago the simplest operation in the affections peculiar to women, if demanding any exposure, was a sealed mystery to all the class except a favored few, who by peculiar advantages or special friendships were admitted as spectators or assistants. It is at present recognized as impossible to demand a practical knowledge of obstetrics as an indispensable requisite of a degree, for there is no way by which all the students could be admitted before graduation to obstetric wards, and, if there were, the objection made to the case recently exhibited at Blockley would be more forcible still against it, since it would require the exhibition of many more women.

We remember that the late Dr. John S. Parry looked upon every case of operation connected with the female sex which could be brought before the class as of the greatest importance, and that he prided himself more on having helped to break down the previously existing barrier of false modesty which had prevailed at Blockley than on any other part of his invaluable work as a lecturer.

The only question, it seems to us, is as to the consent of the patient. If this be obtained, even after considerable persuasion, we think that over all other considerations the interests of education and the interests of the public in having educated physicians are paramount.

Yours sincerely,
E. W. WATSON.

201 NORTH TWENTIETH STREET, PHILADELPHIA.

HALL OF PATHOLOGICAL SOCIETY,
October 15, 1882.

DEAR SIR,—At a stated meeting held Thursday, October 12, 1882, the following officers were elected: President, James Tyson, M.D.; Vice-Presidents, J. Solis Cohen, F. P. Henry, E. O. Shakespeare, J. B. Roberts; Secretary, P. G. Skillern; Recorder, C. B. Nancrede; Treasurer, M. S. French; Curator, Carl Seiler.

Very respectfully yours,
P. G. SKILLERN, Sec'y.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY FROM OCTOBER 14 TO OCTOBER 28, 1882.

WILLIAMS, JOHN W., SURGEON.—To proceed to Vancouver Barracks, W.T., and report upon arrival to the Commanding General, Department of the Columbia, for assignment to duty in that department. S. O. 168, Military Division of the Pacific, October 13, 1882.

MOORE, JOHN, MAJOR AND SURGEON, MEDICAL DIRECTOR, HEADQUARTERS DEPARTMENT OF THE COLUMBIA.—Granted leave of absence for one month, with permission to apply to Headquarters, Military Division of the Pacific, for extension of one month. S. O. 145, Department of the Columbia, October 3, 1882.

TURRILL, HENRY S., CAPTAIN AND ASSISTANT-SURGEON.—Assigned to duty at Fort Omaha, Nebraska. S. O. 112, Paragraph 3, Department of the Platte, October 23, 1882.

LORING, LEONARD Y., CAPTAIN AND ASSISTANT-SURGEON.—Granted leave of absence for four months. S. O. 243, A. G. O., October 18, 1882.

BYRNE, CHARLES B., CAPTAIN AND ASSISTANT-SURGEON.—Leave of absence extended ten days. S. O. 243, A. G. O., October 18, 1882.

BANISTER, JOHN M., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—The leave of absence granted by Paragraph 5, S. O. 203, Department of the Missouri, October 10, 1882, is extended one month. S. O. 113, Paragraph 2, Military Division of the Missouri, October 23, 1882.

OWEN, WM. O., JR., ASSISTANT-SURGEON.—Is relieved from duty at Fort Townsend, W.T., and assigned to duty at Vancouver Barracks, W.T. S. O. 148, Paragraph 1, Department of the Columbia, October 6, 1882.

BUSHNELL, GEORGE E., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Leave of absence extended one month. S. O. 244, A. G. O., October 19, 1882.

WILSON, GEORGE F., ASSISTANT-SURGEON.—Is relieved from duty at Vancouver Barracks, W.T., and assigned to duty at Fort Townsend, W.T. S. O. 148, Paragraph 1, Department of the Columbia, October 6, 1882.

BUSHNELL, GEORGE E., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Extension of one month's leave of absence is revoked. S. O. 247, Paragraph 2, A. G. O., October 23, 1882.

KANE, JOHN J., ASSISTANT-SURGEON.—Leave of absence granted October 9, 1882, Department of the Missouri, is extended two months. S. O. 247, Paragraph 3, A. G. O., October 23, 1882.

WYETH, M. C., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Will be relieved from duty at Fort Meade, D.T., upon his return from detached service, and will proceed to Fort Yates, D.T., and report to the commanding officer of that post for duty. S. O. 172, Department of Dakota, October 19, 1882.

APPEL, A. H., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Granted leave of absence for one month. S. O. 168, Department of Dakota, October 14, 1882.

CARTER, EDWARD C., ASSISTANT-SURGEON.—Now at Camp Price; to proceed to Fort Thomas, and report to the commanding officer of that post for duty. S. O. 159, Department of Arizona, October 11, 1882.

EVERTS, EDWARD, ASSISTANT-SURGEON.—Assigned to duty at Fort Cœur d'Alène, I.T. S. O. 145, Department of the Columbia, October 3, 1882.

TAYLOR, A. W., ASSISTANT-SURGEON.—Relieved from duty at Fort Supply, I.T., and assigned to duty at Fort Cummings, New Mexico. S. O. 208, Department of the Missouri, October 16, 1882.

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PHILADELPHIA, NOVEMBER 18, 1882.

ORIGINAL COMMUNICATIONS.

THE BACILLUS TUBERCULOSIS, AND SOME ANATOMICAL POINTS WHICH SUGGEST THE REFUTATION OF ITS ETIOLOGICAL RELATION WITH TUBERCULOSIS.

FIRST PAPER.

Read, by invitation, before the Philadelphia County Medical Society, October 18, 1882,

BY H. F. FORMAD, B.M., M.D.,

Lecturer on Experimental Pathology and Demonstrator of Morbid Anatomy in the University of Pennsylvania.

I INTEND, this evening, to demonstrate Koch's Bacillus tuberculosis, and, at the same time, will bring forward some points from researches of my own, which will check the acceptance of the doctrine of the parasitic origin of tuberculosis.

Only recently the low organism which is alleged to be the cause of general tuberculosis and phthisis was exhibited in this room by Prof. Whittaker, of Cleveland, Ohio, by invitation of the College of Physicians. It is through his kind instruction that we have been enabled to make similar beautiful preparations of the Bacillus tuberculosis, following strictly the method of staining in its recent improvements as described by Koch, in Berlin.

Dr. Koch's methods of preparation have been so graphically described and demonstrated by Dr. Whittaker, and have been so widely quoted in the various medical journals, that it is unnecessary for me to repeat them.

The bacilli now under the microscope were prepared from the sputa of a phthisical patient in the Philadelphia Hospital, and they correspond in every respect to those of Dr. Whittaker's preparations. Moreover, the patient has died since the sputa have been taken, and the autopsy revealed true tubercular disease. There is, consequently, no doubt of the existence of this organism in the sputa of patients suffering from this disease.

It *appears*, also, that Dr. Koch has conclusively proven, by direct experiments on animals, that this bacillus is the direct cause of tubercular disease,—viz., the genuine Bacillus tuberculosis. The experiments of Koch to prove this proposition are also widely known, having been quoted in medical journals all over the world.

The advantages under which Koch made his propaganda for the parasitic origin of phthisis were unusually favorable. His reputation and his diligence as a mycologist are certainly unrivalled in Germany since the time of the publication of his classical work on anthrax and infectious surgical diseases. He is also an excellent advocate for his cause, and an eloquent writer. Like a good lawyer, he understood how to bring forward his case well and in a convincing manner before the jury,—the medical profession at large. His recent appointment as Imperial Councillor and Chief of the Laboratories to the National Board of Health of the German Empire also gave great weight to his statements. Dr. Koch's conclusions concerning the etiology of phthisis have been endorsed by some distinguished scientists and prominent clinicians in Germany, England, and America. The newspapers of all lands have taken hold of this important matter, and spread the news of the great discovery. Pilgrims from all nations have flocked to Berlin and listened to Koch's words, have seen with their own eyes the fatal bacillus and had its effects demonstrated to them, and have returned convinced and delighted to their homes, to preach loudly and enthusiastically the great doctrine of the true parasitic origin of phthisis. Dr. Koch also demonstrated the Bacillus tuberculosis to Emperor William of Germany. The venerable monarch looked into the microscope, and was deeply impressed and convinced about the infectiousness of phthisis. Hence it must be so.

These views suit the profession exactly. The prevailing opinion has always been that there must be a specific poison of some kind, transmissible from person to person and from animal to man by food, milk, etc. The Bacillus tuberculosis fills the gap excellently, and is now a convenient explanation and proof of the infectiousness of phthisis.

The consequences of Koch's discoveries are now a matter of important consideration. In Germany, by imperial order, in military hospitals phthisical patients are separated from other cases as carefully as smallpox patients; so a gentleman tells me who has just come from Germany. Even here the community begins to regard the disease as eminently contagious. I know of an instance of a young woman suffering

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from phthisis being locked up and avoided, perhaps neglected, by the members of her own family, for fear of the contagium. I have learned of several consumptives who have become worse from the mortification of having their friends avoid them, some even going so far as not to shake hands with them. The moral effects must certainly be most deleterious to these unfortunate creatures and to those who surround them.

The therapeutics of phthisis also must be governed in a great measure by the view taken of the etiology of the disease.

In Europe the profession begins to reflect a little on Koch's theory, and wants more certainty. I am delighted to learn that, in England, Austria, Russia, and elsewhere, commissions have been formed to investigate the etiology of phthisis with special reference to Koch's discovery; and whatever the truth is, it should now soon be decided. Dr. Sternberg, U.S.A., I am glad also to learn, is subjecting Koch's experiments to a careful perusal.

I also have undertaken a renewed research on the infectiousness of tuberculosis under the auspices of the University of Pennsylvania, and ample means and facilities have been furnished to extend the research in a most elaborate manner.

At present I do not pretend to be able to present positive proofs against the existence of a specific tubercular bacillus, my work not having been long enough continued in this direction. Koch's theory may be correct, but thus far it altogether lacks confirmation. He must do decidedly more work to make his results conclusive. Moreover, I can positively prove that true tuberculosis may be produced without the bacillus in question.

The fact that many prominent medical men and scientists blindly follow Koch proves nothing, so long as they have not experimented themselves in this matter.

In the present communication I intend to bring forward some of my anatomical researches in connection with scrofulosis and tuberculosis, as well as some observations of others, which will surely throw grave doubts upon the correctness of Koch's view on the etiology of tuberculosis, and also on the correctness of Koch's conclusions from his own experiments.

It seems to me that there are serious errors in Koch's work, and that he has overlooked anatomical facts and pathological laws in immediate connection with it, and has thus been led to misinterpretation of his own results. He could not have been aware of this, as it is not probable that he purposely would ignore established facts.

Anybody can make errors in research. I must confess that I have been several times disappointed in my own work in drawing and announcing too hasty conclusions. I was sorry, but it was a useful lesson, after all. The great men, however, can make mistakes just as well as we little mortals. Men like Cohnheim have been caught in serious blunders. Dazzled by his really immortal discovery of the emigration of the white blood-corpuscles, he has also furnished some researches which were proven positively to be inaccurate and incorrect. I only give this as an instance. Other great men have also made mistakes, especially some of the French *savants*. Some of the latter are particularly good-natured, however, and do not mind contradicting themselves several times in one breath, or even drawing their conclusions from the wind. Some of Cohnheim's experimental results were overthrown by our own young American workers. A great deal of good work in pathology is done in America; but it is not sufficiently recognized and encouraged by our own profession and by the teachers in American medical schools. Admiration of European pathological work is certainly justifiable; but this forms no reason why the good, honest work of Americans, even that of young men, should be left unnoticed.

Before pointing out the deficiency of Koch's proofs of and arguments for the infectiousness of phthisis and for the existence of a specific organism, the Bacillus tuberculosis, I beg leave to announce briefly the main facts of my researches on the minute structure of connective tissue in the so-called scrofulous persons and animals. I have devoted over four years to this special study, making many experiments on animals. In this research I have been aided at various times by a number of able and diligent assistants, of whom I desire to mention in particular Drs. George H. Rose, O. C. Robinson, Henry Wile, Wm. Gray, and I. W. Blackburn, and Messrs. G. A. Bodamer, W. Chrystie, and W. H. Mercur. I desire to express my thanks to these gentlemen. It would have been impossible for me alone to control and utilize the enormous material at my disposal.

Should the results and the facts obtained,

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to be narrated below, prove to others as conclusive as they do to me, and be similarly interpreted, then the received doctrine of phthisis and tuberculosis will have to undergo some decided modification.

In the time allowed me this evening it would be impossible to record all the steps and details of the investigation. Desiring to explain the character of the research at once, I cannot do better than, with your permission, to reverse matters, announcing first the deductions from the research, and then to follow, as far as time and space will permit, with a brief account of the investigation and of the arguments which, to my mind, prove and justify these conclusions.

My researches clearly show the following points:

1st. The predisposition to tuberculosis in some men and animals, the so-called scrofulous habit, lies in the anatomy of the connective tissue of the individual, the peculiarity being a narrowness of the lymph-spaces, and their partial obliteration by cellular elements.

2d. Only beings with such anomalous structure of connective tissue can have primary tuberculosis, and such animals invariably do become tuberculous from any injury resulting in inflammation, or from repeated injuries.

3d. Scrofulous beings can have no other than a tuberculous inflammation, although it may remain local and harmless.

4th. Non-scrofulous men or animals may acquire the predisposition to tuberculosis through malnutrition and confinement, the latter bringing on the above-mentioned anatomical peculiarities in the connective tissue.

5th. No external etiological influences are necessary to cause tubercular disease other than those which ordinarily produce inflammation, and even scrofulous beings will not become tuberculous unless local inflammation is set up. No inflammation, no tuberculosis.

6th. Non scrofulous animals, so far as can be established now, may acquire tubercular disease through injuries of serous membranes,—viz., peritoneum, pleura, etc., —and even here without any special virus whatsoever. Clinical observations on the post-mortem table show similar conditions and prove the same in man. (Koch's own experiments are also in favor of this proposition, as will be shown hereafter; but he has overlooked this.)

7th. The bacilli, which it is the merit of Koch to have first proved to infest tissues affected by tubercular disease, are not necessary for its causation, even if a special organism exist and be really possessed of such property. The presence of bacilli (so far as our present research goes) is secondary, and appears to *condition* the complete destruction of the tissue already diseased and infested by them, and this destruction is in direct proportion to the quantity of the organisms, which thus regulate the prognosis. The tubercular tissue seems to serve merely as a nidus for the growth of the bacillus.

8th. From the results of microscopic examination, from numerous observations upon the post-mortem table, and on clinical grounds, I have come to the conclusion that phthisis is not a specific infectious disease, but that the individuals suffering from tubercular disease are specific themselves originally, and form a special species of mankind, the "scrofulous."

9th. Scrofulosis is a condition which may arise from malnutrition and seclusion in any being, and thus may be produced artificially. It always depends upon the demonstrated anatomical changes in the connective tissue.

10th. An analysis of Koch's experiments shows that he has not proved the parasitic nature of phthisis, or that there exists a special Bacillus tuberculosis; so that the infectiousness of tubercular disease is still *sub judice.*

The idea of working up the anatomy of scrofulous persons was suggested to me some years ago by the lectures of Prof. James Tyson. Dr. Tyson in his lectures, as well as Virchow, lays great stress upon the predisposition to tuberculosis, and designates it as a peculiarity of scrofulous persons that inflammatory processes in such persons terminate ultimately in the formation of cheesy matter at the seat of injury. The general impression among pathologists and clinicians is that the lymphatic apparatus is in some way at fault in these persons, although there are no direct anatomical observations on this point on record. I thought that the minute anatomy of the tissues of such persons should be investigated, and at once began to collect the necessary material. This presented itself to me in abundance daily in the post-mortem rooms. For the study of scrofulous and other animal tissue, I had also un-

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usually large opportunity. Having the good fortune to be associated with Prof. H. C. Wood in the research on diphtheria for the National Board of Health for the last three years, I of necessity had to examine microscopically the tissues of about five hundred animals (as the records show), and also those of a similar or still larger number of various animals used by members of my classes in experimental pathology in the University laboratory during the last five years. None of the animals referred to were killed expressly for this purpose; they served various purposes, but we always were careful to trace and note the histological points in question.

At first only one peculiarity struck me in the anatomy of scrofulous and rickety children, and this peculiarity is in common with that of the rabbit and guinea-pig,—viz., in all scrofulous beings all the organs supposed to be concerned in the production of white blood-corpuscles were disproportionately large,—*i.e.*, in relation to the size of the animals.* Subsequent studies of the tissues revealed, in addition, some constant and quite remarkable facts, namely, a well-defined difference in the anatomy of the connective tissue between scrofulous and non-scrofulous animals.

To the scrofulous class belong unquestionably the tame rabbit and guinea-pig and all animals in close confinement, while to the non-scrofulous belong the cat, dog, and animals at large.

I have here two specimens under the microscope, to which I invite your particular attention, as they illustrate the histological difference referred to between the normal tissue of the rabbit and that of the cat. The animals, which are representatives of the scrofulous and non-scrofulous species, were of equal age, both healthy, killed in a similar manner, and the sections, which were taken from precisely corresponding parts, are equally treated and mounted. I selected in this case the corsponding parts of the nose of the two animals. It makes, however, no difference what part of the body is taken, as long as it shows some connective tissue. The relative difference to be spoken of is equally striking everywhere in the two animals in corresponding parts of the body. At the first glance it is seen in the specimen from the rabbit that there are a great many more cells in the microscopic field than in the corresponding field in the specimen from the cat; again, that the cells which are located in both cases between the interstices of the connective tissue are predominately round and crowded in the rabbit, with only a few spindle-shaped and stellate cells, while in the cat the cells are mainly of the latter two varieties, scattered and few in number. In other respects the connective tissue proper appears similar in both cases.

The difference seen in the tissue of the rabbit and the cat exactly corresponds to a similar difference between the scrofulous human being on the one hand and a normal individual on the other. Repeated microscopic examination of well-selected cases has shown this.

Let us see now what those cells seen in the connective tissue of the specimens under the microscope signify.

To be explicit, I must briefly narrate the minute structure of connective tissue in general.

The connective-tissue fibrils are in varying number united together to form bundles (which I will, with Shakespeare, call the primary bundles); these again occasionally unite to form larger bundles (well designated as secondary bundles). The bundles arrange themselves at different localities in various manner; in our specimens they decussate at different angles and in all possible directions, leaving between them small spaces which are dependent for their shape and size upon the arrangement and the thickness of the bundles. These spaces are essentially nothing else than serous cavities on a minute scale. They communicate, however, with one another, and thus form a system of channels continuous throughout the whole connective-tissue system of the body. These channels are called lymph-spaces or juice-channels. They contain normally a small amount of serum, and it is also these spaces which harbor the

* O. C. Robinson says in connection with this point, "In studying the anatomy of the animals experimented upon, Dr. H F. Formad directed my attention to a peculiarity in the structure of the blood making organs of the two species of animals named, particularly the latter; and I have myself also had frequent opportunity to observe the following: the lymphatic glands are disproportionately large; the Malpighian bodies of the spleen are larger and more numerous than in other animals, though the organ itself is not large; the marrow of bone is usually red, and contains very little fat; the thymus gland is always of considerable size, and seems never to disappear, or, in fact, has never been found absent. Besides these peculiarities, I have frequently seen small heterotopic lymphatic structures in the interstitial connective tissue in various parts of the body. The question arises whether this evidently leukæmic condition of these animals has not something to do with their scrofulous tendency. It is possible that this surplus of lymphatic structure and of the lymphoid cells comprising them plays an important rôle in furnishing the elements for the tubercle."

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enormous quantity of this fluid when the tissue is the seat of œdema. Blood or air collects in these spaces in certain pathological conditions, and we will also see that inflammatory processes have here their main seat.

There exists a special set of similar channels surrounding or rather enveloping the blood-vessels, the so-called perivascular spaces, the significance and purpose of which are the same as those of the just-described interstitial lymph-spaces, with which they are also in direct communication. These are very prominent in nervous tissues, and are best demonstrable in the brain, where the blood-vessels lie nearly free in these spaces, giving a picture not unlike a piece of wire inserted into a glass tube. In other localities these perivascular spaces do not completely ensheathe the blood-vessels, and are less distinct,—in fact, are sometimes demonstrable only in some pathological conditions. Under normal conditions both sets of channels have the office or function of conducting serum from the blood-vessels to the lymphatics, thus relieving excessive intervascular pressure. They probably play, also, a very important rôle in the creation of white blood-corpuscles from the endothelium desquamated from the walls. Each of the connective-tissue bundles spoken of above is surrounded by a distinct, not quite continuous, membrane composed of large, flat cells. These are the so-called endothelial cells; they are nucleated and closely united at their periphery with one another so as to form those sheaths which envelop the above-mentioned fibrillar bundles, and thus at the same time form the lining for the spaces between them. All that can be seen of these endothelial cells are the nuclei, which appear either round, spindle-shaped, or curved, according to the direction in which the bundles are cut, and these are the cells seen in our preparations.

In the specimen from the cat we see the nuclei of the endothelial cells at more or less definite intervals and generally of fusiform shape; some few round or irregular-shaped cells are also seen in the lymph-spaces of the connective tissue, and these are either desquamated endothelial cells or free white blood-corpuscles.

In the specimens from the rabbit the same appearances are observed, but the quantity of free, round, and irregular cells is considerably larger, and they are frequently seen to block up the lymph-spaces. Of spindle-shaped cells fewer are seen than in the cat. The source of the numerous round and irregular-shaped cells must be considered similar to those few seen in the specimen from the cat. Comparing a large number of sections taken from corresponding parts of the bodies of rabbit and cat, it is also distinctly seen that the lymph-spaces are on the average decidedly narrower and fewer in the rabbit than in the cat. The perivascular spaces are, however, equally free and similar in both.

The filling of the lymph-spaces with desquamated and germinating endothelial cells, or with wandered-in white blood-corpuscles, is a well-known fact in the pathological histology of tuberculosis, but it does not seem to be known that this is a normal condition in the rabbit and guinea-pig and in scrofulous persons long before tubercular disease ensues. Under conditions to be mentioned later, these peculiarities may be, however, occasionally less marked. In general, it may be said that the distinction is certainly definite enough. Any one familiar with the use of the microscope can distinguish the variance in the two tissues by the shape and quantity of cells, if not by the size and shape of the lymph spaces, the latter requiring more experience.

What has been said of the cat seems to hold good for all other non-scrofulous animals as far as we could trace it. The connective tissues of scrofulous and non-scrofulous individuals bear exactly the same relation to one another as the connective tissue of the rabbit bears to that of the cat.

I beg leave to describe now in short how the two tissues (from non-scrofulous and scrofulous animals) behave if they become the seat of ordinary inflammation. When a part in a non-scrofulous normal subject or animal is the seat of an acute inflammation, it is solely in the connective tissue, with its pertaining lymph-spaces and blood-vessels, that the inflammatory process makes its active display. Under the microscope all the lymph-spaces of the affected area are seen filled with cells; often they are enormously distended by them, so that the whole appears like a sponge soaked with a corpuscular liquid. Whether the cells invading our tissue are desquamated and proliferated endothelium of the lymph-

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spaces, or whether they are wandered-in corpuscles, or both, we will not discuss here. They do not stay there long; however, under ordinary circumstances; they are bound to leave the tissue they invaded (resolution), or they must die together (suppuration), forming loss of substance. In either case, particularly in resolution, it is the office of the lymph-spaces to relieve a part of the exudate, and they are the means which promptly, and in due time, effect the carrying off of the mischievous and intruding cells; thus accomplishing the return of the tissue to the normal state. This will only occur, however, if and as long as the lymph-spaces are not obstructed and will allow the free intercommunication of serum between the blood-vessels and the lymphatics, which is so essential to the well-being of the organism.

If, on the other hand, a part in a scrofulous subject or animal becomes the seat of inflammation, the termination of the latter will be an entirely different one. The connective tissue is here at fault; its lymph-spaces, which are narrow and obliterated, do not permit the reabsorption of the exudate, and the tissue of the affected area lingers under the voluminous pressure of the imprisoned cells, which form tubercles. There is no other issue here, and it must die,—*i.e.*, undergo cheesy degeneration. The cheesy mass thus formed may become encapsuled by inflammatory overgrowth of connective tissue, and frequently this is the case I have seen often in rabbits that the development of tubercular disease is stopped in this way for some time. Ultimately, however, the animal will succumb to tuberculosis when the inflammatory process is renewed and extends in the manner to be described later.

The above statements are based upon direct observation from experiments many times repeated. It is distinctly seen that one and the same process, induced in both cases similarly, terminates so differently in the cat and rabbit. The experiments were made under exactly the same conditions, and, the animals being of the same age and equally in good health, it proves clearly that the inflammation is not specific, but that the animal is specific, and that this lies in the above-mentioned peculiar anatomy of the connective tissue of the animals in question.

Tuberculosis is an inflammatory process within itself; it is the natural and only kind of inflammation a scrofulous being can have. It is also evident that for its production no special cause is required, all that is necessary being direct injury to the tissue. Ordinary inflammations are caused in non-scrofulous beings by external influences, such as cold, heat, etc., and nothing more than this is necessary to produce tubercular disease in a scrofulous animal or individual.

It appears from this, and from facts to be mentioned later, that scrofulous animals do not become tuberculous unless an inflammation is induced. No inflammation, no tuberculosis. Hence it is probable that scrofulous beings do not need necessarily to become tuberculous,—*e.g.*, do not get pulmonary phthisis if they escape a bronchitis or an acute pneumonia. In fact, they may escape tubercular disease altogether, and die ultimately of other lesions if no injury to the connective tissue occurs. The details of this research will be given in a future communication.

The results of the observations above briefly narrated suggest the establishment of an anatomical criterion for the predisposition to phthisis.* Animals with this predisposition—viz., the described anatomical anomaly—constitute a well-defined species, that of scrofulous animals. The same anatomical anomaly is seen in men; and hence I think we are justified in classing all the scrofulous human beings as a pathological species of mankind. The scrofulous condition, being an anatomical anomaly, is thus not necessarily a pathological condition, and is by no means a disease in itself. It has its perfect analogue in the domestic rabbit and guinea-pig. The offspring of these scrofulous animals have the anatomical peculiarity of the connective tissue of their parents; they inherit it, and so do the offspring of scrofulous human beings.

Two important points come now into consideration.

1. There are, unfortunately, ways and means by which scrofulosis and, subsequently, tuberculosis can be induced artificially in animals normally not possessed of this condition; and the same is probably true of men.

2. True tuberculosis can be produced even in non-scrofulous animals through

* Philadelphia Medical Times, December 3, 1881.

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simple injuries of serous membranes; and this seems to be also well established for men.

As to the first point. It is a well-known fact that wild beasts in confinement usually die of tubercular disease. I had ample opportunity to see this myself. In the winter of 1875–76 and the following spring a large number of all kinds of dead animals from the Zoological Garden were sent to the University of Pennsylvania. Through the kindness of Dr. Henry Chapman, I examined carefully many of them in conjunction with Drs. Andrew J. Parker and Francis Dercum, and nearly all showed tuberculosis to be the cause of death.

The first experiments to produce artificially and intentionally a scrofulous condition in the cat and dog were made by my assistant, Dr. O. C. Robinson, in the Pathological Laboratory of the University of Pennsylvania, in 1880.* This he accomplished by keeping the animals in close confinement and on rather poor diet for eight months. Injuries on the skin of the neck which previously had healed promptly now repeated gave rise to a bad cheesy suppuration, and within three more months the animals died. Autopsy revealed miliary tuberculosis of nearly all organs.

I have lately repeated this experiment on cats. Taking a piece from the upper lip of one of them, the connective tissue was found normal on microscopic examination. One year later, this cat having been kept in confinement and poorly nourished, again a part of the lip was examined, and I found the connective tissue similar to that of a scrofulous animal, the lymph-spaces being filled with many cells. No injury had previously been inflicted on the lip. The cat had been inoculated with diphtheritic and erysipelatous matter several times, both in the thigh and the back, which ultimately led to a cheesy mass at the seat of inoculation. Finally the cat was accidentally killed, and miliary tubercles were demonstrated in lungs, liver, kidneys, spleen, and lymphatic glands. Three other experiments, in which the animals were not kept so long a time, failed. One of a number of well-fed dogs which I have kept for the past eighteen months (tumor experiments) was accidentally killed, and microscopic examination showed the impairment of the connective tissue of the described scrofulous character to a moderate degree.

On the other hand, it is noteworthy that some rabbits and guinea-pigs fail to become tubercular after repeated and thorough inoculations, even with true tubercular matter. This has been proved by Robinson (*loc. cit.*). He concludes from this that there are non-scrofulous rabbits as well as non-scrofulous human beings. It would have been interesting to have examined the connective tissue of all such rabbits, but this was omitted at the time. Wild rabbits, however, I found to have a connective tissue like non-scrofulous animals,—*i.e.*, with but few cells, and the lymph-spaces free. We had a number of these animals, but in confinement they die soon, if experimented on, of septicæmia, or acute enteritis.

It is highly probable from the above experiments on animals that the normal man may acquire a scrofulous anatomy if ill nourished from a long-continued disorder of the digestive tract, from deficiency of food or exercise, etc., this condition predisposing to tubercular disease. A cold or bronchitis, which in former days passed off rapidly, now in his debilitated system hangs on and leads to phthisis. Again, under this hypothesis, it is not impossible that scrofulous persons may become non-scrofulous by the peculiar obliteration and filling of the lymph-spaces by cells being removed and relieved by proper movements of muscles and lungs, the channels being freed and broken open, as it were. Then, the dangerous obstacles to the reabsorption of any inflammatory exudate that might occur being removed, the passage of serum between lymphatics and blood-vessels goes on unimpeded, lubricating and distending the formerly dry and occluded lymph-spaces.

The *second* exceptional point in the etiology of tuberculosis is the occurrence of miliary tuberculosis secondary to simple inflammation of serous membranes in normal non-scrofulous beings. Experiments, clinical observations, and autopsies sustain this fact. At the same time, it appears that inflammatory processes affecting parts of the body other than serous surfaces do not lead to tuberculosis in non-scrofulous subjects. I will recall here that the anterior chamber of the eye, which is occasionally used as a point for inoculation with tubercular virus, is also a serous sac. Of the same character is the choroid coat, of

* An Experimental Research on Tuberculosis. See abstract, Phila. Med. Times, vol. xii. p. 130.

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which ophthalmoscopic examination reveals tubercles so beautifully in cases of miliary tuberculosis.*

There are cases on record of traumatic injuries of the eyeball in non-scrofulous persons, in which general miliary tuberculosis was a consequence.

It is possible, also, that croupous pneumonia may lead to pulmonary phthisis in the non-scrofulous, on the ground that the epithelium lining the air-vesicles approaches very closely in histological character the lining of the serous membranes,—in fact, is considered by some to be endothelial. The inflammatory exudate of croupous pneumonia is fibrinous, as it is in inflammation of serous membranes. This peculiarity may also explain Tappeiner's alleged success in producing pulmonary tuberculosis in dogs (animals not predisposed to it) by making them inhale phthisical sputa distributed by a spray-producer.

First Litten,† clinician to the Charité in Berlin, and subsequently other clinicians and pathologists, called attention to the important fact that true miliary tuberculosis may be caused directly by acute pleurisy and peritonitis in persons not predisposed to phthisis, and without any cheesy masses being found in any part of the body. This is alleged to be the case especially when there is a rapid reabsorption of the exudates formed in this lesion. Again, it is a well-known fact—any text-book of pathological anatomy gives it—that inflammatory products in serous membranes give rise occasionally to peculiar nodular formations, the so-called pseudo-tubercles. The distinction of these from true tubercle is not as easily made as some allege, and it is certain that to do it, in addition to a profound knowledge of mycology, such as Koch unquestionably possesses, requires a considerable experience in pathological histology. Moreover, it is also well established that primary true tubercle occurs in the organized inflammatory products of serous membranes.

This is eminently correct. I have been fortunate enough to examine on the autopsy-table, and to submit to thorough microscopic examination, several cases in which primary tuberculosis was found profusely in all the serous membranes and in the organized products, adhesive bands, etc., formed upon them. There was perfect absence of pulmonary phthisis or any cheesy matter elsewhere; the lymphatic glands were also normal. In two other cases I observed general miliary tuberculosis, including the lungs, beyond all doubt secondary to tubercular peritonitis, and with no cheesy matter anywhere. There was no phthisical history in either case. The tubercles met with in these cases were in microscopic appearance identical with those of ordinary scrofulous cases, only fibroid change was more common in them than in tubercles originating in scrofulous persons. I will detail these cases upon another occasion.

Some interesting thoughts suggest themselves as to how the tubercular disease here originates. Litten (*loc. cit.*) lays stress upon the rapid reabsorption of the exudate, and suggests the carrying of infecting particles from the latter into the blood, as a probable cause. I think this quite plausible, but would rather suspect here a blocking up of the lymph-spaces of the connective tissue by the fibrin and molecular débris suspended in the serum which is being reabsorbed. I think that in this way the anatomical characteristics of a scrofulous tissue become artificially established. If such is the case, then it is evident that a subsequent inflammation must of necessity lead to tubercular disease. I suggest this, however, on mere hypothetical grounds, not having made any thorough observations in this direction.

The before-mentioned pseudo-tubercles, originating in the earlier stages of inflammation of serous membranes, vary in histological character from mere collections of lymph-cells held together by some fibrinous coagula, up to firm organized nodules, not distinguishable from true tubercles, and usually do lead to true tubercles. To produce them artificially in the peritoneum is a very simple experiment. Dr. O. C. Robinson did it under my eyes, by introducing simple foreign bodies into the cavity, and succeeding in three out of five or six experiments. I tried the same experiment in four dogs last summer, using chemically clean powdered glass, with one successful and exceedingly beautiful result. Koch has unquestionably produced tuberculosis in the peritoneum of his cats and

* I doubt if practitioners avail themselves sufficiently of the ophthalmoscope in the physical diagnosis of tuberculosis.

† M. Litten, Sammlung Klin. Vorträge, No. 119. Ueber acute Miliartuberculose, 1877. For further references see Wiener Med. Presse, No. 36, 1882; Charité Annalen, vol. vii., Berlin; Krankheiten der Respirations-Organe, in Virchow's Handb. der Spec. Path. und Ther., vol. i.; Virchow, Geschwülste, vol. ii. p. 725, etc.

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dogs. Whether they were false or true tubercles, however, we must leave undecided: of course they all contained bacilli, as the latter were introduced into the peritoneal cavity, and, acting as foreign bodies, excited the inflammation with its natural termination in serous membranes. From what I have detailed above, one of these natural terminations is tubercular disease, so that the specific action of the bacilli is not required, even in the non-scrofulous dog. Koch could just as well have used some sand for inoculation, and saved his valuable cultures of the Bacillus tuberculosis for inoculation into some other parts of the bodies of the non-scrofulous dogs, cats, rats, etc.

Why did Dr. Koch inoculate the latter-named animals only in the peritoneum and anterior chamber of the eye, while scrofulous animals (rabbits and guinea-pigs) he inoculated indiscriminately in any part of the body? This is a mystery. Let us try to solve it.

I wish to mention some of our experiments in connection with tuberculosis.

The experiments on diphtheria of Prof. H. C. Wood and myself* have shown that those rabbits which did not succumb to the disease within a few days nearly all died of tuberculosis in the lapse of four to six weeks or more. In order to see whether the diphtheritic material acted specifically in the production of tubercle, or whether the latter was merely the result of the inflammatory process, we experimented by inoculating rabbits with non-tubercular and perfectly innocuous foreign material, such as pieces of glass, metal, wood, etc. The result was, in the majority of cases, cheesy, suppurating masses at the seat of inoculation, followed in the course of a month or more by death from tuberculosis.

To-day, I can safely testify that Dr. Wood and myself have seen die of tubercular disease proper, more than one hundred rabbits out of five or six hundred operated upon, without a single one of these animals having been knowingly inoculated with tubercular matter of any kind, and without any intention on our part to study tuberculosis in them. All rabbits and guinea-pigs subjected to injury in any part of their bodies in the various experiments, and surviving the immediate or acute effects of the latter, had, with only a few exceptions, but one fate,—viz., to die of tuberculosis, provided they lived long enough after a traumatic interference to develop the lesion in question

These facts were also particularly well brought forward by the results of a carefully conducted series of one hundred special experiments on tuberculosis, executed by Dr. O. C. Robinson, in the Pathological Laboratory of the University of Pennsylvania. (Experimental Research on Tuberculosis. See abstract in *Philadelphia Medical Times*, vol. xii. p. 130.)

In non-scrofulous animals, viz., other than rabbits and guinea-pigs, neither Robinson, nor Wood and myself, nor any other experimenter, ever succeeded in producing tuberculosis by inoculation, unless done into peritoneum or anterior chamber of the eye. No one, including Koch, ever produced tuberculosis, in animals not predisposed to it, by inoculation into the skin, for instance. Koch's records of his own experiments prove this, and show that whenever he desired to produce tuberculosis in the rabbit or guinea-pig by means of his bacillus, he inoculated indiscriminately into any part of the body; but if he wanted to demonstrate the effects of his parasite in the non-scrofulous animals, he promptly inoculated into the anterior chamber of the eye, or preferably into the peritoneum. After what has been explained in connection with inflammation in serous membranes, it is evident that these experiments do not prove that the bacillus is the cause of tuberculosis.

In a future communication I will dwell more upon the experimental induction of tuberculosis and on the histology and distribution of tubercular products. Before concluding, however, my present remarks on this point, I would like to refer to some errors into which not well-informed or too exacting experimenters and observers are liable to fall. The chief of these is that some consider nothing as tubercle which does not impress the eye as distinct nodules. Here I desire to recall that miliary aggregations are but secondary products. All primary tubercular products are simple infiltrations of lymphoid cells, like those of any inflammatory process, only that they permanently fill the lymph-spaces, making usually undue pressure upon the blood-vessels, and obliterating the latter. By the unaided eye, or with but low magnifying power, nothing abnormal is noticed,

* Research on Diphtheria for the National Board of Health, 1880, Supplement No. 7. See also our Reports for 1881 and 1882.

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except, perhaps, as in the lungs, some relatively irregular thickenings of the septa or the alveolar walls. In primary tuberculosis there are only in exceptional cases more extensive circumscribed aggregations of lymphoid cells, approaching miliary nodules. Still, this infiltration of cells is sufficient to occlude blood-vessels by pressure, inducing ultimately retrograde changes of the tubercular products, cheesy degeneration of the latter, including the tissue they invade, and, finally, loss of substance.

It is this absence of distinct miliary *nodules* which has led to the belief that phthisis might exist without tuberculosis. Giant cells are also no criterion for tuberculous tissues.

Another source of error lies frequently in the interpretation of experiments. An animal may die too soon, from septicæmia or other acute effects, and in such case it will be alleged that a given interference did not produce tubercular disease; or an animal may not die at all; this especially occurs when the tubercular products remain local, *e.g.*, as an excapsulated cheesy mass. Local circumscribed tuberculosis of some of the less important parts of the body in man is also known to be harmless.

Again, as detailed before, the results of the experiments depend greatly upon the species of animals used, their age and state of health, and the part of body operated upon.

The supreme question before the medical world is now, whether the disease under consideration is really infectious. The natural history of tuberculosis, just narrated, is surely against the existence of a special poison such as now offered again by Koch. It is clearly proved that no infective agent is required to produce tuberculosis. It is possible that Koch's Bacillus tuberculosis in itself is capable of inducing the disease. There are at present no positive proofs either for or against it.

The evidence of those who have had a large experience with consumptive patients is in perfect opposition to the infective theory of phthisis. This, I think, is of more importance than experiments on the lower animals. The alleged fact that occasionally the healthy wife of a consumptive husband acquires phthisis (or the reverse), after prolonged cohabitation, can reasonably be explained by the presumption of an acquired scrofulosis from physical effects, misery of life, loss of sleep, etc.

Dr. Vincent Edwards, of the Brompton Hospital for Consumptives, testifies that during his seventeen years' experience and observations upon many thousand patients he has never observed a case of infection from person to person. None of his nurses ever contracted the disease.

The belief that milk or meat from tuberculous animals produces consumption when used as food is also not warranted by scientific observation, nor is it based upon facts.

The natural history of tubercular disease and the laws of pathological physiology are against the presumption of a parasitic origin of phthisis.

We can certainly not have parasites more pernicious than the living cells of our own body prove to be in the case of tuberculosis. Our own cells (lymphoid cells) become dislodged from their natural location and move into other regions of the tissues, where they are not wanted, and where they do harm to the tissue they invade and still more to themselves. They, however, continue to move through the body (as it seems, mainly by means of the perivascular spaces, the lymph-spaces proper being blocked up), everywhere leaving on their way small colonies of breeding cells which block up vital channels. These colonies of cells do not find enough nourishment in the new locations, and hence remain usually limited in size. Now the cells move closer together, forming nodes, to feed upon one another, and finally die and poison their host with the effete products of their dead bodies (cheesy degeneration).

The ubiquitous bacteria, which (the bacillus included) linger around in countless number upon all surfaces without the least harm to a normal individual, easily penetrate a diseased tissue and make it a nidus for their growth. Young unripe cells created by morbid processes, frequently giant cells, which under favorable conditions would have been transformed into a harmless connective tissue, from want of proper nutrition undergo retrograde change, and thus fall a prey to bacteria. While normal cells cannot be affected by bacteria (except by the anthrax bacillus, perhaps), morbid cells do form (as I have myself seen) a good culture-medium for large crops of bacteria. Various kinds of bacteria (micrococci, rod-bacteria, bacilli, and vibrios or their spores) are present together in varying proportions everywhere. Different culture media favor,

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however, the development of different kinds of bacteria: so all those new formations liable to cheesy change favor the predominant growth of *bacilli*. Here belong tubercle, leprosy, glanders, lupus, typhoid infiltrations, syphilis, swine plague, and anthrax. Micrococci prefer the living blood and its white corpuscles as a medium for luxuriant development, if they succeed in getting access to it. The exanthemata and the ordinary kinds of septicæmia belong here. We cannot confirm, so far, that there is any difference between the micrococci of these last-named diseases, nor is it probable that a difference exists.

Koch has discovered that tubercle-tissue is always infested by bacilli, and this is correct; but this tubercle-tissue is not created on account of, or caused by, the bacilli. These organisms invade the tissue in question solely because it is a culture-medium favoring their predominant development.

As soon as tubercle-tissue undergoes complete cheesy degeneration and softening, the bacilli—Koch acknowledges this also—disappear from that locality nearly altogether, because no food is left and because the fat resulting in that process acts deleteriously upon them. This is also against the etiological relation of the bacilli with tuberculosis.

To consider, as Koch does, giant cells as mere special capsules of the bacilli is a mistake not warranted by anything.

Koch further claims that the Bacillus tuberculosis differs from other bacilli morphologically, and in its behavior to staining fluids. We cannot confirm this. My assistant, Mr. Bodamer, and myself, after prolonged study with instruments as good as those of Koch, and after using all known methods of staining, have failed so far to see any special features in the bacillus in question which would make it distinct from other bacilli.

If Koch's bacillus even were possessed of distinct morphological features, it would not materially help to make it a specific organism.

Prof. Wood and myself made the observation that bacteria may acquire special morphological and physiological features in culture; excluding fully the possibility of Koch's "*Verunreinigungen.*" Moreover, we have seen micrococci increase in size under certain conditions of culture. This is the more interesting, as Prof. Rothrock, of the University, made the suggestive observation that lower fungi or algæ, under culture, perhaps from pathological conditions of their own, may undergo decided, perhaps permanent, modification in their anatomy.

Whether or not the Bacillus tuberculosis stands in any causative relation at all with tuberculosis, only future investigations will show.

It appears to me, however, that the bacillus still plays a very important rôle in phthisis,—viz., perhaps conditions the fatal issue of the disease. Bacteria appear to effect the complete destruction of diseased tissues which, without being infested by them, would recover to a normal state or transform into a harmless tissue. Tissue-destruction seems to stand in direct proportion to the quantity of these organisms, which thus regulate the prognosis.

The study of bacteria as *causa mortis* is by no means less important than that as *causa* or *materia morbis*.*

NOTES UPON LILY OF THE VALLEY.

BY H. C. WOOD, M.D.

SINCE the publication of the paper of Prof. Sée upon the *Convallaria majalis*, a good deal of attention has been attracted by the plant, and there is at present much reason for further trial, and for the hope that the plant will prove a valuable addition to our therapeutic resources. A reference to the United States Dispensatory will show that it has long been known to be a cardiac poison, having been partially investigated many years ago by Russian physicians, and it is now affirmed that it is considerably used in Russia in the treatment of cardiac dropsy. Before the paper of Prof. Sée, I believe, Dr. R. D'Ary, a Russian physician residing in Rome, Mich., wrote enthusiastically as to the value of the remedy. He says, "In small doses it is a stimulant to the heart, increasing the frequency of its beats; in larger doses it is a tonic and sedative, lessening the frequency but increasing the energy and regularity of the contractions. In overdoses it is a swift destroyer of life, thoroughly paralyzing the

* In the present communication I have given the mere outlines of the natural history of tuberculosis I reserve it for future communications to give the details of the various parts of this research. The next paper will embrace a detailed account of the structure of scrofulous tissues, with appropriate illustrations, so as to facilitate to others the perusal of my work. This will be followed by a research of Mr. Mercur's on phthisis.

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heart. Over digitalis it has a most important advantage in the absence of a cumulative effect, at least so far as personal observations allow me to judge. On the other hand, I have noticed that some patients seem, from idiosyncrasy, unable to endure it even in small doses. Wherever these unpleasant effects — manifested by dyspnœa, faintness, pain at the heart, etc. —become manifest, alcoholic liquors seem to me the promptest antidote. I would, therefore, strongly advise, in every new case, to begin with minimum doses and gradually increase until the desired effect is obtained, which generally takes place very promptly."

Dr. Formad states that in his native country, Roumania, the lily of the valley has been ever since his recollection largely employed as a domestic remedy and also by the profession.

Knowing that Dr. M. Fussel, of Chester Springs, Pa., had used the remedy with advantage, I wrote to him, and received the following reply, which was not prepared for publication, but is at the present juncture well worthy of it.

"My dear Doctor,—I have used the 'Convallaria' in three cases, in form of infusion of plant (leaves, stem, and root), as I find it in September and October, eight ounces of bruised plant to a pound of boiling water, of this, two ounces every two hours.

"Mr. A. K——, æt. 67, for two years past has had palpitation and feebleness of heart's action, difficulty in ascending elevations, and, finally, inability to lie down, anasarca of extremities, with effusion into the cavities; heart-sounds obscured, with evident dilatation; had been treated with digitalis with usual varying effects.

"After three days' use of the convallaria infusion there occurred a colliquative diarrhœa, also diuresis, to which patient objected as too debilitating, when the dose was reduced, but in a few days the patient was pleased that his breathing was freer, his heart 'fluttered' less, and he could lie down. The heart-sounds were not only more distinct, but there was more force and uniformity in its action. He continued the use, and shortly was able to ride out and visit me. The improvement continued for some weeks, until he had an apoplectic seizure, on the night of the 9th of October, when he died. Was the convallaria in its tonic effect on the heart a factor in this?

"Mrs. J. H—— used the infusion with a view to reducing the anasarca of the extremities, and toning the heart. We were both sure we had employed a valuable remedy to this end.

"Mrs. D—— used the remedy, and insisted that there was less effusion into the limbs, and that her respiration was easier. There was organic heart-disease.

"As you will see, my observations have been necessarily imperfect, hardly to be regarded as of value. I have not yet procured any of the preparations of the principles of the plant, but desire to."

NOTES OF HOSPITAL PRACTICE.

BELLEVUE MEDICAL COLLEGE.

CLINIC OF PROF. LEWIS A. SAYRE.

A CASE OF SPONDYLITIS—REMARKS ON THE WIRE CUIRASS AND THE PLASTER JACKET IN POTT'S DISEASE IN YOUNG CHILDREN.

I BRING before you to-day, gentlemen, a little child suffering with Pott's disease (spondylitis), age 2 years and 5 months. I have never seen this child before. It is brought to me by Dr. A. J. Wolff, late of the United States army.

You will notice the position in which this child is standing,—its head and shoulders thrown back to balance itself, and all of the muscles of the trunk made rigid to prevent any movement of the spine. We learn that fourteen months ago this child fell down-stairs a distance of some fourteen or fifteen steps. Within a short period the mother has noticed that the right leg has been drawn up. Now, here is a little fellow whose disease of the dorsal vertebræ is very high up, and who has at the same time such an enormous abdomen and very small pelvis that it will be almost impossible to apply the principles of treatment by the plaster-of-Paris jacket and head-rest here. This child, being so small, would very probably come under the category of Mr. Howard Marsh, his statement, however, being that the plaster jacket cannot be applied to a child under nine years of age. We will have to treat this little patient in the horizontal position, the object of the treatment being to give rest to the diseased parts, which are the bodies of the dorsal vertebræ, and to relieve them from all pressure. That is the whole principle.

Under the old plan of treatment, the patient was kept in bed for months, and sometimes years, but the attendants neglected to apply extension to relieve the vertebræ from pressure; and thus, if cured at all, they were cured with deformity still remaining. When the patient was placed upon his back, they should have used extension in order to prevent such deformity as you see in this child. In such a case,

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where you cannot use the plaster jacket and head-rest, the best substitute is this little wire cuirass. It is the best thing you can substitute for the plaster jacket and head-rest for these small children. The cuirass, as you see, is simply a wire framework, well padded, in which the child is laid, and its feet brought down to the small foot-pieces of the cuirass, to which they are fastened by a roller bandage, a broad band being passed around the thorax to keep the child in the apparatus. The child can then be taken out in the open air, which is of great advantage and benefit. The instrument should of course correspond with the size of the child. You will find in many cases that you will have to make yourself such alterations in the instrument to suit the case. A little mechanical knowledge is therefore an absolute necessity in this branch of your studies. I have very often seen a little child in this condition, with this enormous abdomen from indigestion, and by putting them in the horizontal posture the digestion becomes more perfect and the abdomen less distended with gas, and you can then put on the plaster jacket and head-rest. The distention of the abdomen having subsided, the pelvis becomes prominent enough to support the jacket. Several children have been brought to me completely paralyzed and the abdomen enormously enlarged, and by putting them in the cuirass for a time the abdomen has been reduced to the normal size, and I have then applied the jacket. You will notice that the child (previous to my putting it in the cuirass), when carried by the nurse, is held in an upright position, which is very detrimental in this disease. It is of course impossible for the nurse to carry it in a horizontal position, as the head of the child falls back; whereas when placed in the cuirass the child can be carried in any position with perfect ease and comfort. Now, always remember that where you have caries of the vertebræ, in no case put weight on those vertebræ, or even allow the child to assume the erect posture, as that causes additional pressure. If the child is so small as to require a diaper, you can apply it across the cuirass. This child, you will observe, has been circumcised, and Dr. Wolff has just given me a new explanation of Pott's disease, as furnished him by the Homœopathic Hospital. He states that they informed him this was the cause of the disease. I can hardly credit such a statement, and therefore do not give it to you as a fact, as there is no reason why circumcision should have any relation in producing this difficulty of the spine.

[The child was then placed in the cuirass, the feet secured to the foot-pieces of the instrument, and a bandage passed around the thorax and abdomen, a roller bandage being fastened around the legs.]

As soon as the child can walk, it is much better for him to be put in the erect posture. The plaster-of-Paris jacket, with the head-rest, is then the best treatment you can secure; but as long as the abdomen remains distended or the pelvis so undeveloped as to forbid the application of the plaster jacket to furnish firm support, the cuirass is the only method to be adopted.

PARALYTIC TALIPES TREATED WITH ARTIFICIAL MUSCLE AND ELECTRICITY.

Here is a boy 8 years of age, whose mother informs me that four years ago he had the measles. On recovering from that disease he lost the use of his hands and feet. He has also had spinal meningitis, the mother states. He had improved very much, but last winter he had an attack of sickness, and again lost the power in his feet and hands. He has, however, to a certain extent recovered the use of his upper extremities, the principal difficulty now being with the feet. The little fellow now has talipes valgus, with some equinus. The question is whether we can relieve this child without making section of the tendo Achillis. This right foot I can bring to its natural position, and while holding it there I get no spasm upon making point-pressure upon the tendon. I conclude, therefore, that in this case the tibialis anticus muscle is deficient in power. I shall therefore apply an artificial muscle, according to the plan of Mr. Barwell. This consists of strips of adhesive plaster with an eye at one end. I now pass these strips around the foot so that the eye in the strip will come just at the point of insertion of the tibialis anticus. This is now secured with a roller bandage, and thus our insertion for the muscle is formed. We now form the origin of the muscle by taking a small piece of tin, formed slightly concave to fit the leg, at the top of which is an eye. I next take two strips of adhesive plaster, cutting in each strip two longitudinal slits the width of the piece of tin, through which I pass the tin, and in

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this manner it is held in the centre of the strips. A strip of plaster is now placed under the tin and reversed over the lower edge, and we can now apply the dressing, bringing the eye of the tin at the point of origin of the tibialis anticus, then secure it firmly in position by means of the strips of adhesive plaster, which are to be passed around the leg, covering the whole with a roller bandage from the foot to the knee. We now have both the origin and the insertion of the muscle secured. I now take a small piece of rubber tubing, in each end of which is sunk a shot with a hook attached. One end of this, you observe, I hook into the eye at the origin of the muscle, and the other end I hook into a piece of light chain, which has been secured at the insertion of the muscle, the elastic force being regulated by the links in the chain according to the amount of contraction you desire to overcome. In this manner we secure an external artificial tibialis anticus muscle. We will allow the child to wear this for a time, until the flexor muscles can be restored to their normal condition, using electricity to aid in securing this result. There are many cases of *club-foot* that can be cured by this simple plan of Mr. Barwell's, without tenotomy.

Now, here is an important point involved, and one which I wish you to remember. If I bring this boy's foot to its normal position, and, while holding it in a natural position, by making point-pressure upon the tendo Achillis when stretched to its utmost I secure a spasm of the muscle, that muscle must be cut before we can overcome the deformity. If, on the contrary, it does not produce a spasm, constant traction will cure the deformity without section. The rule is that when you put any muscle, tendon, or fascia upon the stretch, and while upon the stretch point-pressure produces a spasm, it ought to be cut. I could not, as you have observed, bring this boy's foot to a right angle, and yet I am hardly satisfied with it, as I do not get a spasm with every pressure I make. I will therefore leave it for a time, to see if he will recover with the treatment I have just applied, and without division of the tendo Achillis.

In using electricity in this case, you pass a small needle down through the bandages to the integument at the origin and insertion of the muscle, in this manner convey the electricity to the integument, and thus obviate the necessity of removing the bandages. By this means we endeavor to develop the atrophied muscle, and in time do away with the artificial one applied. If you are going to overcome a contracted muscle, you endeavor to approximate the origin and insertion of the muscle before you apply electricity. By the constant traction of the artificial muscle just applied, we can in time overcome the contraction of the peroneal muscles; but the traction should never be so strong that the strong muscle cannot re-deform the part if it wants to. If I were to prevent that, I should weaken that strong muscle and make it good for nothing. I simply desire to equalize the power between the flexor and extensor muscles. In this boy's case the peroneal muscles are too strong. I therefore secure this artificial muscle in such a manner that the peroneals will yield by the continued traction, but I have not made it so strong that the boy cannot deform the foot if he wishes to.

[The boy, to prove this, then contracted the peroneal muscles, and gave the foot the appearance of talipes valgus; but the resisting power of the artificial muscle overcame the contraction of the peroneal muscles, and brought his foot back again to the normal position.]

You observe, as I hold the child's arm up perpendicularly, that the hand falls forward, indicating that the flexor muscles here are stronger than the extensor; and yet on irritating the extensor muscles, as I now do, the hand assumes an upright position. This child, the mother states, was seen by a physician four years ago, and he told her the child would grow out of his difficulty, and that is the reason she had not taken any steps in the matter until the present time. That is a very unsafe plan to follow, as in some cases the patient may become incurable, and thus, instead of growing out of it, grow into the deformity. This boy I will again present to you at a future clinic.

[As the child left the room, the improvement in his walking, owing to the application of the artificial muscle, was remarked by all present.]

[Note.—October 11, 1882.] I here bring before you again this little fellow, upon whom we applied Mr. Barwell's dressing for the cure of talipes valgo equinus at my last clinic. The child, as you observe, walks with much more grace and ease.

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The mother also states that she noticed an improvement in his general condition as early as the next day after the application of the dressing. I will continue this treatment for some time, and in the mean while carefully note the results.

TWO CASES OF SPASMODIC PARALYSIS DUE TO GENITAL IRRITATION.

I here bring before you a young lad sent to me from Broome County, in this State, the son of a medical gentleman, who has kindly consented for me to bring him before you. It is a case of much interest, and, as it is a subject I may have to bring before you during the winter, I have taken this opportunity as a beautiful illustration of the disease and its practical working upon the nervous system, it being much more easily comprehended by this means than by any verbal description I might employ. This boy is 12 years of age. His intellect is wonderfully bright. I was perfectly amazed at his rapid answers to my questions. He has never been able to walk without assistance, but could at times manage to cross the school-room by holding to the backs of the seats or desks. He, however, has the use of his arms. You observe that he walks on the very end of the metatarsal bones of the great toes. The adductor muscles are strongly contracted, so as to bring the knees directly across each other. This deformity is called scissor-legs. The knees are partly flexed, and the legs also are partly flexed upon the thighs. It is impossible for me to abduct his limbs, and, as you observe, he cannot stand alone. When lying down, he can by a great effort place his legs so that I can get my two fingers between the knees. His feet in this position are three feet apart. By great force I can bring his legs parallel with each other, but it is about as much as I can do. When let alone, you observe, the muscles instantly contract, one knee riding over the other, and the feet being inverted. The knees, as you observe, are flexed, but by some little force I can bring them nearly straight, and when I bring them in this position, my assistant holding at the heel, and make point-pressure upon the semi-tendinosus and biceps muscles, I get no reflex spasm, showing that these muscles can be stretched to be of use without the necessity of their division. Now I have the foot at a right angle, and even at more than a right angle, and, my assistant meantime keeping the leg straight at the knee, I make pressure upon the plantar fascia and tendo Achillis; but I find no reflex spasm. It is probable that these muscles can be stretched and brought into their proper position. Now, if I can retain the foot at a right angle without producing a reflex spasm, it shows that these muscles do not require cutting: therefore the left leg can probably be brought into proper vitalized action without cutting the tendons.

We will now take the right leg. Here you observe how the tendo Achillis is drawn up. You notice that by slow persistent effort I can gradually bring down the foot, but the knee is still slightly flexed. The right foot I find I cannot bring to a right angle by any amount of force, and when I make point-pressure upon the tendo Achillis I get a reflex spasm, and I also, upon pressure upon the plantar fascia, secure a reflex spasm. This shows that there is no mechanical means by which I can treat this right leg successfully until I have severed these contractured tissues.

Now, what is the cause of all this? Here is incoördination. The boy tells me that, by taking his time to think of it, he can bring his foot down to the normal position; but it moves without his will or direction when moved suddenly. There is an irregular spasmodic muscular action all over the lower extremities, and the flexor and adductor muscles, being the stronger, give us this deformity. He has never had any inflammation of the spinal cord or its meninges; neither has he ever had any convulsions to produce this difficulty.

Now, when I come to examine his genital organs, here you will observe the orifice of the prepuce is contracted almost to a pin's point, completely imprisoning the glans penis, leaving but a small orifice through which the urine can escape. You will observe that there is quite a large glans hidden under the prepuce, unless this large size is owing to some collection of secretions beneath the prepuce. It is, of course, impossible to have cleanliness around the penis with the glans in this condition. This induces a constant irritation, which causes an erection of the penis, and which produces a deranged condition of the nervous system, causing these muscular spasms, with more or less paralysis. Now, you will observe that upon my touching the prepuce he has an instantaneous spasm all over the lower extremities.

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In the first place, we must remove the cause of this irritation. I shall not cut the tendo Achillis of his right leg, which gives the reflex spasm, until I have removed the cause of this genital irritation and note the result produced by the circumcision. This being a private patient, I cannot operate before the class. I will, however, endeavor to bring him before you at a future clinic.

This man that I now bring before you represents the same difficulty in the adult that you have just seen in that little boy. You will observe the curious shoe he is in the habit of wearing, with its broad flat base. There is no arch for the instep whatever, as the arch of the foot is entirely absent. He can walk a short distance, but afterwards he cannot walk at all. He states that he has suffered so much that he is willing to undergo any operation for the purpose of securing relief. You will observe that he is a stout, strong man, 28 years of age, and remarkably well developed, with one single exception. You will observe on the outer side of the spine of the tibia there is a wasting of the tibialis anticus muscle. You see this deep groove on the outer side of the tibia in both legs. There is atrophy of both tibialis anticus muscles and loss of development from some cause. From the lack of power in these muscles to hold up the arch of the foot, the foot drops down, so that the scaphoid bone receives the pressure of the body, and the foot becomes everted. A reflex action has been produced, causing the peroneal muscles to contract in such a manner that it is impossible to invert the foot. When I make pressure upon the cords of these muscles, after putting them upon the stretch, I produce a reflex spasm. It is therefore useless to attempt anything in this case until I have severed these tendons, both feet being in the same condition. You observe the scaphoid bone prominently projecting on either side, and the impossibility of inverting the foot by any amount of mechanical means I may apply. After I have severed these tendons, I shall bring the feet into the normal position, and endeavor to restore the paralyzed anterior tibial muscles by means of the daily use of electricity and massage, for the purpose of exciting nutritive action.

I was in hopes that by putting a steel spring under the arch of the foot I should be enabled to treat him without cutting the tendons, but, unfortunately, these peroneal muscles are contractured to such an extent that they must be severed. This being a private patient, I cannot perform the operation here, but I hope the gentleman will allow me to present him to you at a future clinic, in order that you may note his condition after the operation.

[The operation was performed the following day at the residence of the patient, and the feet at once restored to their normal position, and secured by broad strips of adhesive plaster passed around the feet, and thence up the inner sides of the legs, and secured by a roller bandage.—Rep.]

New York, October 4, 1882.

TRANSLATIONS.

The Prevention of Syphilis—Its Relations to Clandestine Prostitution in Paris.—Dr. Martineau, at the conclusion of a series of clinical lectures on the therapeutics of syphilis (*La France Médicale*), made the following most appropriate remarks: "Gentlemen, to cure syphilis is good; but to prevent it, to hinder its development and propagation, is better. This is the goal the physician should strive for. I could not, therefore, terminate this study of the therapeutics of syphilis without indicating to you some prophylactic measures, old or new, employed by physicians and municipalities. This study, however, would be too long; permit me to defer it to another occasion. To-day I wish to confine myself to a few considerations which may serve to lead you to meditate upon this great problem of sociology.

"The prophylaxis of syphilis comprises two problems for solution, according as it is looked upon as individual or general. The first consists in preserving the individual from syphilis. These measures consist in the use of dilute alcohol or lotions of chloral, eucalyptus, eau de Cologne, vinaigre de Pennès, or much-diluted Labarraque's solution, before and after impure coitus. I do not speak as a preservative means of the *condom:* it is the more dangerous because of the false security which it gives and the negligence which it occasions.

"*General prophylaxis* comprises some questions very important to solve. Prostitution is carried on in two ways: by registered women (*femmes cartées*), and by

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others (*femmes libres*). The former are subjected to visitations which take place every fortnight (twice a month). I do not need to dwell upon the absolute insufficiency of these visits. If the material conditions do not interpose, registered women ought to be examined every day, in order that the physician might learn the fact of the development of the venereal disease even before it is suspected. In all these cases, where are involved questions of public health of such importance not only to the individual but also to the state, municipalities should be able to take sanitary measures more complete and superior to those in force at present, and to proceed to make these visits every two or three days at least. All that is wanted for this is a larger medical staff.

"The latter class, in the present state of legislation, is not subject to any control or to any medical examination. But, if we consult the statistics, native and foreign, we see, relatively to this subject, that regulated prostitution gives, for the propagation of syphilis, a means five or six times less than clandestine prostitution. The surveillance of the police should, therefore, be especially directed to those women who devote themselves to clandestine prostitution. Here, I know, comes up the question of the liberty of the individual; which it is not easy to touch, and which renders the solution of the problem difficult. However, when it concerns the prevention of the development of a disease which interests the generality by the perturbations which it introduces into the reproduction of the race, the individual should disappear, and the legislator should not stop short of the measures most proper for drying up the source of the contagion. Among the means the execution of which would be easy, it seems to me that submitting to a special examination every individual, man or woman, who is arrested on the public streets would be of the highest necessity. If found diseased, he should be consigned to a special hospital until completely cured. If necessary, if convicted for the cause which led to his arrest, the time spent in the hospital might be counted as part of the sentence. Gentlemen, I leave these considerations for your meditations. I would have been able to develop a much greater number, but, apart from the fact that this sociological dissertation would lead us too far from the subject which I wished to treat of before you this year, I propose to study it in a special work upon prostitution, and all the questions which it gives rise to, for which I ask you for a few months' indulgence. But, in order to show you that this study of clandestine prostitution forces itself upon communities, and that it is urgent to remedy it promptly, it will be only necessary for me to cite a few figures which prove the extension of syphilis. The Lourcine Hospital, which admits only women who devote themselves to clandestine prostitution, received, in 1871, 1460 cases of venereal disease; in 1881 it received 1964; and the wards are constantly full. In spite of all our efforts at each weekly consultation to take in, by introducing supplementary beds, a much greater number, we are obliged to refuse them. All this proves to you that the police measures are absurdly futile (*dérisoires*), and that clandestine prostitution is augmenting, and that by this means syphilis develops more and more. It is, therefore, urgent to act most quickly, and to bring an efficacious remedy to the propagation of syphilis. The administration of Assistance Publique, in permitting to the staff of the Lourcine Hospital the free dispensing of medicine, facilitates the cure of syphilis. It belongs to the commonwealth to check the progress of clandestine prostitution, the agent of the propagation and extension of syphilis. If it is not sufficiently armed with authority by present legislation, let it call for the promulgation of a law more complete and more severe."

Osteotomy and Tarsotomy in Club-Foot.—At a recent meeting of the Paris Academy of Medicine, Jules Guérin (*La France Méd.*, September 21) read a communication on congenital club-foot and its treatment, which he concludes as follows:

"1. That tarsotomy, ablation, and resection of the bones of the tarsus in order to remedy club-foot, even the most marked, in the infant, is an operation which, in the name of principles and practice, should be reproved as one of the most grave abuses of contemporaneous surgery.

"2. That this method, which results in a useless mutilation, dangerous from the double point of view of the form and the functions of the foot, can always be avoided and supplemented by the true orthopædic method, which comprises tenotomy, syn-

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desmotomy, massage, and orthopædic apparatus.

"3. That tarsotomy (at the most excusable only in the adult, and for inveterate club-foot) has not yet shown itself preferable, on the score of the dangers to which it gives rise, and the services it renders, to the treatment of the deformity by apparatus and shoes intelligently adapted to the deformity.

"4. Finally, it will not do, in order to justify culpable experiment of orthopædic tarsotomy, to invoke the possible applications of this method to the deformities resulting from disease of the bones of the tarsus after the disappearance of accidents causing them; these applications cannot be confounded in any way with those proposed for club-foot. A reservation is made with regard to the place of operations of pseudo-tarsotomy: experience, which alone will enable it to be estimated properly, has not thus far permitted it to be determined."

THE INTESTINAL ORIGIN OF URINARY ALKALOIDS.—In a communication to the Société de Biologie, last August, Bouchard announced the discovery of certain alkaloids in the urine of those suffering from infectious disease, in which he pointed out chemical analogies existing with the ptomaïnes, and expressed the opinion that these are furnished by the disassimilation of infectious agents, rather than by morbid elaboration of the material by the animal cells. He also concluded that the morbid alkaloids, like the cadaveric alkaloids, are of vegetable formation. Although at that time he had not been able to detect these substances in normal urine, he has since then, by a modification in his method, been able to detect traces of these alkaloids in the urine of healthy persons, although in much smaller proportion than in the others.

The existence of alkaloids even in traces in healthy urine seems at first sight as if it should ruin the theory of their vegetable origin. But if in infectious diseases there are vegetable organisms in the tissues or in the fluids, there are likewise in health enormous quantities of microbes in the digestive tube. It is possible, therefore, in the normal state that some vegetable alkaloids may be formed in the intestine, thence absorbed and carried into the blood, and finally to be eliminated by the urine. Examination of the alvine discharges confirmed this hypothesis: recent fecal matters invariably contain these alkaloids in health as well as in disease, and in enormously larger proportion than in the urine. These fecal alkaloids in health are multiple, and vary in their chemical reactions. They vary in quantity in proportion with the amount of the intestinal fermentation. In an ordinary case of diarrhœa from using indigestible food, without fever or colic, the author estimated that at least one-third of the liquid portion of the putrid dejections was constituted by microbes. From twelve grammes of this he extracted alkaloids in proportion approximately of fifteen milligrammes per kilo. The chemical characters of the alkaloids in the urine are repeated in the fecal alkaloids; and anything which reduces the amount in one will reduce it in the other. The following statements are made in conclusion:

Alkaloids exist in the body of living individuals in the normal state.

These alkaloids are formed in the digestive tube, and apparently are elaborated by vegetable organisms, the agents of intestinal putrefaction.

The alkaloids of normal urine represent a part of the intestinal alkaloids, absorbed by the digestive mucous membrane, and eliminated by the kidneys.

Those diseases which increase intestinal putrefaction, by the same process augment the quantity of the urinary alkaloids.

Considering as probable that alkaloids may, in certain infectious diseases, have for their origin the microbes spread among the tissues and fluids, it appears certain that in typhoid fever a part, at least, of the urinary alkaloids are of intestinal origin. —*Revue de Médecine*, October.

BACTERIA IN GONORRHŒA.—It has finally been demonstrated that a specific urethritis may be distinguished from a simple urethral discharge by the aid of the microscope. Leistekow (*Deutsch. Med. Zeitung*) declares that microbes are present in considerable numbers in the thin milky discharge of chronic gonorrhœa, and have been detected in a case of twelve months' duration. They are less frequent in the thick creamy pus of recent acute gonorrhœal inflammation.

DR. HUGHLINGS JACKSON, in a recent address, says very truly that too much specialism in teaching tends to produce prigs rather than practitioners.

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PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, NOVEMBER 18, 1882.

EDITORIAL.

ISOPATHIC THERAPEUTICS.

ONE of the most unpleasant pages of medical history is that upon which is inscribed the long list of nauseous and repulsive agents which at various times in the past, during the reign of empiricism, have been administered by ignorant and vulgar attendants to those so unhappy as to fall into their hands. The principle that unusual emergencies warrant extraordinary measures has seemed to suggest to a certain class of minds the use of the most fantastic and offensive remedies. Since the dissemination of a knowledge of the physiological action of drugs, of course the further resort to the crudities of Paullini's *Dreck-Apotheke* has become impossible for those claiming to be scientific physicians, although some traces of it still linger in country districts.

More reprehensible and not less disgusting than the medical employment of human excreta, or of those of the lower animals, was the refinement (!) introduced into Hahnemannism by a German horse-doctor named Luz, about 1796, of administering internally the morbid products taken from another diseased body. Literally adopting the doctrine that like cures like, Luz, in the treatment of smallpox, gave the purulent discharge derived from smallpox sores; in syphilis the remedy was taken from the surface of a chancre; and so on. Notwithstanding the utter absurdity of this doctrine and the repulsive character of the treatment, with the added danger of spreading infectious disease, the author of the isopathic method, as it is called, was not without followers and imitators. Other diseases were likewise attacked and the list considerably extended. Surprising as it may seem, some of these remedies are still in use, and may, even in this city, be obtained prepared *secundum artem* in homœopathic pharmacies. In the American Homœopathic Pharmacopœia for the current year (published by Boericke & Tafel, New York, 1882) the following attractive titles of "isopathic remedies or nosodes" appear: *anthracin*, *glanderine*, *gonorrhin*, *leucorrhin*, *syphilinum*, *buboinum*, etc. The late Dr. Constantine Hering is said to have introduced *psorin* (derived from pustules of psora,—the itch) for chronic skin diseases, and to have used it largely in his practice. Owing to his teaching and influence, as we learn from the above authority, this abomination is now used more than any of the others. It is not clearly seen how the administration into the stomach of even potentized pus will dislodge the *acarus scabiei* from its burrows in the skin; but the experiment is less dangerous than the internal administration of the virulent morbid products of syphilis, smallpox, anthracæmia, and glanders, and perhaps less repulsive than the buboinum, the gonorrhin, the leucorrhin—Faugh!

A CORRECTION.

IN the Medical News column of *Gaillard's Medical Journal* appears a paragraph to the effect that "oil has been struck" upon property belonging jointly to the Pennsylvania Hospital and the Pennsylvania Institute for the Blind, situated in the western part of the State, and, also, "that there are hundreds of applications for leases for the land. The property is now estimated to be worth from two to five millions of dollars."

Mr. William G. Malin, the respected steward of the hospital, pronounces this very largely a newspaper *canard*. It is true that a Mr. Cook, of Philadelphia, bequeathed his estate, comprising several houses in Philadelphia and some four thou-

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sand acres of forest-land, principally in Warren County, to the institutions named, nearly forty years ago; but it was charged with several annuities, and the estate cannot be divided until these cease. The houses in this city are now the most valuable portion of the legacy, the wild lands being leased at nominal rates in order mainly that they shall be properly cared for. So far as is known at the Pennsylvania Hospital, there is no oil on the property, and the lands are not productive of income to the trust. The entire bequest is at present valued at not far from four hundred thousand dollars. The statements, therefore, with regard to the oil and the millions, unfortunately do not appear to be warranted by the facts.

We make no apology for occupying so much space in to-day's issue with the paper of Dr. Formad to the exclusion of other matter, but desire to direct attention to it as the result of very much labor, and as affording the most plausible explanation of tuberculosis recently offered. The parasitic theory of Koch does not accord with the well-known clinical facts of the disease, is therefore highly improbable, and, we believe, will be eventually disproved. It has been accepted with a rush, and probably will continue its meteoric flight until it passes out of sight. The paper and specimens of Dr. Formad have been referred to a carefully-selected committee by the County Medical Society, which committee owes to its Society, to itself, and to the subject, a very careful consideration of the matter. We hope in a future issue to print an elaborate report from this committee. If Dr. Formad's statements and observations are correct, his theory is fairly proved; if they be confirmed, foreign pathologists will have to look well to their laurels, lest they be transferred to the New World.

PROCEEDINGS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, SEPTEMBER 7, 1882.

The VICE-PRESIDENT, Dr. J. SOLIS COHEN, in the chair.

Carcinoma mammæ. Presented by Dr. C. B. NANCREDE for Dr. CHAS. WIRGMAN.

MRS. M., æt. 48 years, the mother of three children, and had nursed all her children but the last, which was born sixteen years ago. Never had had abscess of breast, traumatism, or eczema of the nipples, although she had experienced pain in the right breast when nursing. There was no carcinoma in her family history. About the middle of June, 1882, she first noticed a lump in her right breast, at its upper inner quadrant, about the size of an egg. A few nights previously she had a severe lancinating pain in the right breast. It did not seem to grow till after an exploring needle had been inserted, when the growth became softer, much larger, very painful, and the skin and superjacent veins showed marked changes. August 6, 1882, the growth was still freely movable, and a mass the size of a pigeon's egg could be felt in the axilla. Dr. Wirgman removed the whole breast by two semicircular incisions, opened up the axilla, and removed all the glands up to the clavicle. Although slow in healing, the case has done well since operation.

This case presents special points of interest. Its history and appearance were eminently suggestive of a rapidly-forming sarcoma, either cystic or one into whose substance hemorrhage had occurred. Upon careful examination under ether, the discovery of the enlarged gland suggested the improbability of sarcoma. After removal, the macroscopic appearances once more threw doubt on the diagnosis, as there was for at least one-half, if not more, of the circumference of the growth a distinct *appearance of a capsule;* the tumor had been broken down by a hemorrhage into its substance. Subjected to microscopic examination, the specimen was again puzzling, since sections of the first pieces embedded showed in nearly every portion of their extent small spindle cells of a connective-tissue type. A second piece revealed a typical carcinoma of the soft variety.

Recurring carcinoma of mamma and axillary glands. Presented by Dr. C. B. NANCREDE.

The patient was aged 37 years. Before the discovery of the primary tumor, about eighteen months back, she was in perfect health, although she had undergone much mental anxiety. Hearing a vivid account of another case of carcinoma mammæ, her mind became

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deeply impressed. Shortly afterwards she discovered a growth in the upper inner quadrant of the left breast, which had attained to the bulk of a small orange within one year after its first discovery. She lost much flesh from the time of the discovery of the growth. She had never suffered from traumatism, and, although she had suckled one child, she had never had sore nipples. There was no hereditary history of carcinoma. In less than two months after a removal of part of the breast, a small nodule appeared in the cicatrix, while the axillary glands enlarged rapidly. On July 8, 1882, there was a small nodule in the middle of the original cicatrix, while the axilla was occupied by the mass of indurated glands. The growth partially embraced the axillary artery, and the radial pulse was decidedly affected. Not being allowed to remove the whole breast, I freely excised the small recurrent growth, and after a tedious dissection removed the axillary tumor, which I here present, laying bare the artery and vein for a space of over an inch, clearing everything out to the clavicle, and distinctly recognizing the coracoid process of the scapula. I cannot refrain from emphasizing the importance of the thoroughness with which this axillary dissection should be performed. Not a single gland should be left. When the operation is properly conducted, there is hardly any hemorrhage.

This case was treated on Listerian principles, but with a spray of acetate of alumina, and the wound was dressed with the same. There was no inflammation, heat, pain, or subsequent induration, and, if I remember rightly, the case required but five dressings until the wound became superficial, and fewer would have been necessary had perfect coaptation been secured. One or two points where stitches made marked tension showed a surrounding blush, which disappeared on the removal of the stitch, thus showing that the *irritation of tension* was the trouble. The temperature rose to 100.2° at the end of the first twenty-four hours, after which it remained under 100°. The pain, after the removal of the stitches, amounted to nothing. I believe that this is the first case where acetate of alumina has been used in this city in a Listerian operation, and its success disposes of the absurd statement that carbolic acid *is* Listerism.

Carcinoma of stomach. Presented by Dr. J. H. MUSSER.

This man applied to the medical dispensary of the Hospital of the University of Pennsylvania for treatment early in April of this year, and it was without difficulty that malignant disease was diagnosticated. He was a farmer, of good habits, 53 years old, previously in good health. For the last six months he had suffered from "weakness of the stomach" and general debility. He had lost much flesh, and had constantly a severe sickening pain in the epigastrium, extending to the upper part of the lumbar region, which became much worse within an hour after eating. Appetite was poor; tongue clean and pale; bowels constipated, with troublesome flatulence. A tender, non-pulsatile, movable tumor extended across the epigastrium from the margins of the ribs on one side to a similar site on the other, one inch and a half above the umbilicus. He presented an anæmic, cachectic appearance.

Dr. H. Plank, of Morgantown, took charge of the case, and wrote to me, April 21, 1882, that the patient had been benefited by treatment, but that he was confined to bed by sheer exhaustion. June 5, the doctor reported increased weakness and emaciation, with pain along the left side and shoulder. June 10, he commenced vomiting undigested food, mucus, and grumous purulent matter. He died June 20, of exhaustion, after an illness of nine months.

Specimen.—One-fourth of the pyloric end of the stomach is involved in the growth, which extends along the greater curvature for four inches, along the lesser two inches, and completely encircles the organ. The stomach-walls in front of the disease are dilated, the muscular coat being hypertrophied and the mucous membrane congested. The mass encroached upon the calibre of the viscus so as almost to occlude it. The tumor consisted of three nodules, one of which was ulcerated on its mucous surface and presented the appearance of a scirrhus. The glands in the lesser omentum were diseased.

Spindle-celled sarcoma of thigh. Presented by Dr. J. HENRY C. SIMES.

The patient was 60 years old, an Irishman. Two years ago, he first noticed at the lower and outer part of the thigh a small swelling, which grew rapidly to the size of a hen's egg, when it was removed. Shortly afterwards a second tumor was noticed in the cicatrix, having the same character as the previously removed growth. This was also removed by operation, and again, in a still shorter interval, a third similar growth was developed in the same locality, which was also removed by the knife. When admitted to the Episcopal Hospital, he had at the lower and outer part of the thigh a linear cicatrix about two inches long, beneath and adherent to which, as well as to the surrounding integument, was seen a tumor as large as a walnut, movable upon the deeper tissues, painless, dense, and irregularly nodular. There was no glandular enlargement observable. No other tumors were present. The tumor was readily removed with the adherent overlying skin. Microscopic examination showed that the neoplasm consisted entirely of large spindle-shaped cells, which contained large oval nuclei.

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THURSDAY EVENING, OCTOBER 26, 1882.

The PRESIDENT, DR. JAS. TYSON, in the chair.

Hypertrophy of the prostate gland, accompanied by profuse and fatal hemorrhage. Presented by Dr. J. B. ROBERTS for Drs. J. M. ADLER and WM. HUNT.

THE patient, aged 66 years, weighing 150 pounds, of regular habits, had enjoyed good health until within one year past. On a number of occasions during the past year he had slight hæmatinuria. He passed urine with ease, but complained of slight perineal pain. On the 12th of September, while in usual health, he was attacked with sudden, acute pain in the bladder, which he was unable to empty. Dr. Adler saw him in a short time, when the patient complained of great hypogastric pain, and was much prostrated, with a blanched, sallow, cold skin, and a rapid and feeble pulse. A well-defined pyriform swelling occupied the hypogastric region, extending upwards to the umbilicus. After stimulants and morphia had been given, about one pint of fluid blood was drawn off by the catheter, after which, this instrument becoming blocked, a double one was introduced, by means of which injections of warm water were thrown into the bladder and another pint of broken-down coagula was removed. A solution of alum, twenty grains to the pint, was then introduced into the bladder and allowed to remain. Despite the internal use of ol. terebinth. and ol. erigeron., with opium suppositories, the hemorrhage continued, necessitating recourse to the catheter, injections, etc., to free the bladder from coagula. Death ensued on the sixth day, from exhaustion induced by the repeated hemorrhages. The diagnosis arrived at by Drs. Hunt and Adler was carcinoma of the neck of the bladder.

Sectio cadaveris.—Upon incising the hypogastrium, the distended bladder was at once seen, containing nearly a pint of clotted blood. This was removed by the hand, through an opening in the viscus, when Dr. Roberts felt near the vesical neck, protruding into its interior, a pear-shaped mass about the size and shape of the adult uterus. This was evidently a greatly-enlarged middle lobe of the prostate gland, covered by unaltered mucous membrane. The lateral lobes were also enlarged. The mucous lining of the viscus was smooth and congested, presenting at one point two small circular depressions with cleanly-cut edges. Owing to circumstances, no further examination of the body was made.

DISCUSSION.

Dr. ESKRIDGE treated recently an interesting case of recurring hæmaturia, supposed to be due to a varicose condition of the veins of the vesical neck. The patient was a man aged 77 years, who five years ago, and at intervals since, had lost considerable blood. The former attacks had yielded readily to ergot, but shortly after the onset of the last one Dr. Eskridge had found the bladder distended with a large clot, which he had been unable to break down by injections of either alkaline or acid solutions. The secretion of urine was suppressed during the last twenty-four hours of the patient's illness, the blood drawn from the bladder presenting no characteristic odor. The man died apparently from uræmia, two or more severe chills preceding death, although no convulsions occurred, and he remained conscious to the last. Unfortunately, no post-mortem examination was obtained.

Dr. FORMAD thought that the growth resembled rather a sarcoma than a carcinoma. He had seen two instances of round-celled sarcoma of the prostate. All growths starting from the epithelia of the genito-urinary tract, as well as from the cavity of the uterus, the kidneys and supra-renal bodies,—in short, growths of all the organs arising from the middle layer of the blastoderm, microscopically resemble sarcoma, and usually prove to be such when microscopically examined.

Dr. TYSON said that this specimen possessed a special interest for him, inasmuch as he had had his attention forcibly directed to the differential diagnosis of a simple hypertrophy of the prostate, from malignant disease of that organ, by having lately under his care a gentleman in whom ergot at first proved of much benefit, but in whose case the catheter was soon demanded. This instrument was used with unusual skill and gentleness by the patient himself, notwithstanding which blood occasionally followed its use. Exceedingly severe pains next developed, radiating from the bladder to the testicles, groins, and inner aspects of the thighs. Emaciation soon set in, and he died at the end of fifteen months. At the autopsy malignant disease of the prostate was found, involving by infiltration the lateral aspects of the bladder and the neighboring parts, so as to compress the nerves, thus accounting for the radiating pains complained of. He would like to know from Dr. Roberts whether his case presented this symptom of radiating pains, and also the source of the hemorrhage, as the smooth surface of the growth, and the healthy condition of the mucous membrane of the bladder, are such as to excite surprise.

Dr. ROBERTS, in reply to the various questions propounded, said that, having only made the post-mortem examination, he knew nothing beyond the facts given in the notes read. As to the source of hemorrhage, he would call attention to the two small erosions of the mucous membrane of the bladder as the probable source.

Report of the Committee on Morbid Growths.—"The specimen presented by Dr. Roberts, upon microscopic examination, is found to consist of the histological elements composing

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the prostate gland. There is no evidence of any neoplasm, except a numerical hypertrophy of the structures of the organ. The specimen is a hypertrophic prostate gland."

Caseous degeneration of the kidneys. Presented by Dr. J. B. ROBERTS for Dr. DUNMIRE.

Owing to Dr. Dunmire not having seen the woman until within a few hours of death, the history is of necessity imperfect. She was a married woman, 39 years old, whose husband is said to have infected her with some form of venereal disease. The husband had been dead for about one year when the patient first came under treatment. There were no evidences of syphilis, so that the supposed venereal affection of the past had been presumably gonorrhœa. When seen, September 14, 1882, she was exceedingly ill; gave a history of general ill health for the past few years, but dated the present trouble some weeks back, when she had bathed in the surf while menstruating. This was followed by a chill, since when she had steadily grown worse. When Dr. Dunmire saw her, she complained of sore throat, difficult deglutition, anorexia, sick stomach, pain in the back, with sharp pain running towards the groin, especially on the right side, tenderness over the abdomen, and frequent scanty micturition. The pulse was 140, the temperature 103°, and there was profuse leucorrhœa. An unfavorable prognosis was given, which was soon verified by her becoming unconscious; and she died six hours later.

Autopsy.—The abdomen alone was allowed to be examined. All organs healthy except kidneys and bladder. The latter contained a little urine and mucus: its walls were much thickened, and its lining membrane was congested. The left kidney had little true kidney-structure left, but was converted into a group of seven or eight cysts containing a white cheesy material of a moderately firm consistence. The ureter was much dilated and thickened for about three inches from the pelvis of the kidney. The right kidney was normal in outline, but when incised revealed one large cyst with creamy contents, and also another small cavity containing a few minute calculi. Several of these could be felt through the walls of the normal ureter, thus accounting for the ante-mortem renal colic. The perinephritic structures were unchanged, as well as the capsules of the kidneys, although these latter were perhaps more adherent than normal.

Lymphomatous tumor of the mediastinum. Exhibited by Dr. W. S. LITTLE for Dr. G. C. SMITH, of Rondout, New York.

A young man æt. 24 years had been but a few days under Dr. Smith's care, having come from Boston, where his physician had pronounced him phthisical, and had recommended a sea-voyage. During the past few months small nodular masses had developed in the muscular tissue of the right chest-walls, near the median line in front, and also posteriorly. The axillary and supra-clavicular glands were involved. Shortly after Dr. Smith first saw him he developed marked dyspnœa, and died suddenly, without any evidences of marked lung-disease, except perhaps some symptoms of pleuritis. There was apparently mitral disease; anasarca, especially of the lower extremities, gradually developed.

Sectio cadaveris.—The skin was hard and friable; nodular masses were found disseminated through the muscular tissue of the chest-walls, which had undergone some species of degeneration; the costal cartilages presented evidences of a degeneration similar to that seen in the muscles. On removing the sternum, the subjacent tissues were markedly pigmented, and the anterior mediastinum completely obliterated by a mass of the size and shape of the half of a large lemon, which pressed against the heart. The large bronchi were involved in the growth, otherwise the lungs seemed healthy, and evidences of slight pleurisy were found. The pneumogastric nerves were both involved, chiefly the left, and on further dissection the disease was found to occupy all of the lower parts of the posterior mediastinum, involving the contiguous osseous tissues. The nerve-involvement explains the sudden death. The diaphragm was also involved in the lower portion of the growth. The four portions of the growths shown to the Society are—1st, one of the subcutaneous nodules; 2d, a small portion of the left lung near its root; 3d, a portion of the anterior mediastinal growth, with part of the trachea, bronchi, and aorta; 4th, one-quarter of the tumor which, involving the diaphragm, projected from the left thoracic wall into the chest-cavity. The growth was considered to be carcinomatous at the autopsy.

DISCUSSION.

Dr. FORMAD inquired whether there were any other evidences of cancer in the remainder of the body.

Dr. LITTLE replied that none were detected.

Dr. FORMAD then said that he was unaware of any specimen of primary carcinoma of the mediastinum on record, and moved the reference of the specimen to the Committee on Morbid Growths, as it was probably a sarcoma.

Report of the Committee on Morbid Growths.—"The mediastinal growths are found, on microscopical examination, to consist of a mass of hypertrophic lymphatic glands, and pigmented. There are also seen adipose and fibrous tissues in a state of active proliferation."

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Cirrhosis of liver in the stage of enlargement.
Exhibited by Dr. E. T. BRUEN.

T. W., aged 20 years, colored, has worked on a farm since boyhood, and has been much exposed to weather. His habits were temperate; he was free from either syphilitic or malarial taints. Father is still alive; the mother died of phthisis. He was never robust, but had had only one severe illness,—viz., typhoid fever,—from which he convalesced perfectly, but he readily "took cold." He was first seen by Dr. Bruen, at the University Hospital, in January, 1882, when he gave the following history. Abdomen began to swell two years ago, with neither pain nor tenderness. Was obliged to rise at night to urinate. The abdominal swelling increased, and the previously regular bowels became constipated. Occasional sharp, shooting pains were felt across the chest when lifting weights or working hard, and also slight, dull pain over the liver, lasting for a few moments only. When seen, abdomen measured fifty inches. On January 19 he was tapped, nineteen quarts of fluid being removed, rendering plain a much-enlarged liver, covered with smooth nodular elevations, with the apex-beat of the heart displaced upwards into fourth interspace. March 18, five gallons more fluid were removed, after which pleural and bronchial complications arose, which soon subsided. May 6, paracentesis by capillary needle was resorted to, which was followed by much localized tenderness around the site of the puncture. Symptoms of peritonitis developed next day, which terminated life the same evening. During life the diagnosis was most difficult and interesting. The enormous size of the liver, the palpable bosselation of its surface, giving a sensation like that of crepitating tissue, as though fluid lymph had been thrown out, and finally his abstemious habits, with absence of either syphilitic or malarial taint, suggested malignant disease. The excessive rarity of primary carcinoma or sarcoma of the liver at his age, with his family history, negatived this view. He had had some dyspepsia. Enlargement of the liver, connected with catarrh of the bile-ducts, would have presented symptoms of jaundice, and intermitting temperature, terminating by death from cholesteræmia. The case, then, was one of simple cirrhosis.

Sectio cadaveris.—The abdomen contained six gallons of purulent fluid. Both the parietal and the visceral peritoneum were covered with a thick coating of inflammatory lymph, tinged with blood from multiple capillary hemorrhages. The abdominal veins were all replete with blood. The liver weighed nearly five and a half pounds, was of a nutmeg appearance, on section was indurated, and presented a bosselated, nodular appearance. The gall-bladder was thickened, and contracted about two-thirds in bulk. The bile-ducts were normal. The spleen was covered by a pseudo-cartilaginous capsule, but was otherwise normal, as were also the stomach, pancreas, intestines, kidneys, and supra-renal bodies. The abdominal lymphatic glands were slightly enlarged.

DISCUSSION.

Dr. SEILER remarked that, having seen the case during life, it was almost impossible to divest one's self of the idea of malignant disease. He thought that the projections were the unaltered portions of the liver, which had been compressed and squeezed out by the contracting interstitial tissue.

Dr. BRUEN remarked upon the obscurity of the etiology.

Dr. TYSON asked Dr. Formad, who had examined the specimen microscopically, whether he considered it to be in the first or the second stage of the affection.

Dr. FORMAD replied that he considered it to be in the commencing second stage, and detailed the microscopical appearances.

Dr. TYSON, after briefly adverting to the causation of cirrhosis, said that his reason for asking Dr. Formad whether he considered that the organ was in the first or the second stage of cirrhosis, was that some few years since an important insurance case had been argued in our courts where the defence was set up that the man had not a cirrhosed liver because it was enlarged. For his part, he had no doubt that a liver could be in the second stage of cirrhosis and yet be enlarged. There might be enlargement from fatty infiltration concurrent with interstitial inflammation.

C. B. NANCREDE,
Recorder.

NEW YORK ACADEMY OF MEDICINE.

STATED MEETING, NOVEMBER 2, 1882.

DR. FORDYCE BARKER, M.D., President, in the chair.

DR. W. E. FOREST read a paper on "*The Management of Labor with Reference to the Prevention of Subsequent Uterine Disease.*"

There was an unquestioned relation of cause and effect, said the author, between the puerperal state and uterine diseases. In one-half of the cases of uterine disease the trouble dated from some previous confinement, and it became us, therefore, as obstetricians, to look and see if the responsibility rested in any degree upon us. He would strive first to make his remarks practical, and, secondly, to found his statements as far as possible upon anatomical and physiological facts.

Uterine disease as a sequel of labor might arise from two general conditions: first, laceration of the cervix and pelvic tissues; and, secondly, subinvolution of the uterus and vagina, with or without laceration. Laceration

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of the cervix was the first in time as well as in importance. The author then discussed the causes of lacerations and the manner of obviating them, and referred to the writings of Dr. Emmet and Dr. Sinclair, in which it appeared that the most frequent cause of laceration of the cervix was a rapid first stage of labor. Dr. Forest, however, did not believe that a rapid first stage of labor often produces laceration. He referred to statistics in support of his view, and stated that dilatation was a physiological and not a mechanical process: it was really a relaxation rather than a dilatation. The preparation for this process commenced weeks before labor. There might be no more pressure upon the cervix in rapid than in tedious labor, since the cervix gave way or relaxed before the coming head. There was normally a harmony of action between the zones of the uterus in labor, and when this was disturbed by the abnormal nervous condition of the patient it should be restored by the administration of chloral, morphine, etc. Tedious labor, or rather tedious first stage of labor, had been pointed out as only a possible cause, not a most important cause, of laceration. Statistics, however, did not bear out this assumption; on the contrary, it was shown to be a most frequent and important cause. This part of the subject was illustrated by diagrams made from frozen sections of the pelvic organs, going to prove that there were anatomical reasons why tedious labor should predispose to the accident of laceration. The external os did not dilate satisfactorily, the cervix became greatly lengthened and thinned, its natural resiliency was impaired, and after long-continued contraction of the body of the uterus, and pressure by the head, there was great liability to laceration of the cervix, either at the utero-cervical junction or at the os externum. The remedy was evident,—namely, to prevent tedious labor by restoring the harmony of action between the body of the uterus above and the cervix below. Chloral and morphine were the agents usually employed, and their administration should not be delayed until the patient is worn out. Moderate doses should be given, so as not to paralyze the uterus, but so as to regulate nervous action. Gentle digital dilatation of the os was also a very important means of restoring harmony of action between the os externum and the lower uterine zone.

The author believed that the forceps, when used carefully, very seldom caused laceration. Abnormal presentation, and also premature rupture of the membranes, might act as a cause, but they could not be considered in detail on the present occasion.

Laceration having occurred, notwithstanding all our efforts to prevent it, what shall be done to avoid future uterine disease? One important thing to be done was to keep the parts clean by injections of disinfectant solutions. To attempt to keep the lips of the wound in apposition by stitches was hardly to be thought of. He had in a few cases tried the slipping of an elastic band over the cervix, thus bringing the parts together, and the results had justified a further trial of the method.

With regard to subinvolution, Dr. Emmet had stated that he had never treated such a case without there being present also more or less laceration of the cervix. Statistics did not show that laceration of the perineum was a cause of this condition; on the contrary, it seemed that subinvolution occurred less frequently when laceration of the perineum was present, and the author was of the opinion that this apparent paradox might be explained by the fact that stricter cleanliness was then observed. It was probable that if the laceration extended through the sphincter, or beyond it, involution would be interfered with. Septicæmia is a potent cause of subinvolution, even where it is so mild a case as to give rise to very slight elevation of temperature. Among the causes might also be considered loss of blood, general debility of the nervous system, and too early leaving the bed.

Dr. BECKWITH was called upon to open the discussion, and said that there were many points of interest in the paper which might be discussed, but that he felt unable to do so without previous preparation. He spoke of the importance of always making a careful examination of the uterus and its appendages, and of the vagina, within six weeks after confinement.

Dr. CASTLE believed that a disparity between the size of the brim of the mother's pelvis and of the head of the child was sometimes the cause of laceration of the cervix instead of rigidity of the os, as was supposed. He believed that the softening which took place in the cervix up to the time of labor was a preparatory process to easy dilatation, and that the œdematous condition of the parts which led to it was therefore normal and desirable. Premature rupture of the bag of waters rendered laceration liable to occur.

Dr. C. C. LEE said there were many excellent points contained in the paper, with which he fully agreed. He had found that in the majority of cases in which the laceration was sufficiently extensive to attract the physician's attention, its origin could be traced to tedious labor, and he believed that the accident took place because of the œdematous or macerated condition of the tissues which was then present. Laceration had occurred very seldom, according to his observation, in cases of rapid labor. He referred to the presence of arterial hemorrhage as an indication of laceration. The source of the hemorrhage might be discovered by making an examination with the Sims speculum. As

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to the treatment of laceration when it was present, he had done the immediate operation for restoration of the parts in two cases. In the first case, that of a primipara, he used silk sutures, but within two days they tore through the tissues, and the result was a complete failure. The second case was that of a multipara, and the wire suture was used, but the result was the same as in the former case. With regard to the use of the elastic band, he could not understand how it could be kept on the parts. An important reason for hastening a tedious labor had not been mentioned,—viz., the fact that this was the origin of nearly all cases of vesico-vaginal fistula. He fully agreed with the author of the paper as to the manner of hastening tedious labor by the administration of the drugs which tended to restore the nervous system to its normal condition, and by resorting to manual dilatation.

Dr. W. T. LUSK said it was considered a great recommendation of the accoucheur among women if it were said of him that he never lost a case. He thought, however, that in the future the accoucheur's merits would be estimated rather by the health of his patients some time after delivery. There were two classes of cases of rapid labor: one was that in which the patient's nervous system was in such an abnormal condition as to lead her to bear down strongly almost from the beginning of labor, and in such cases bad laceration of the cervix was liable to take place. He did not believe that digital dilatation of the cervix was often justifiable. Instead thereof he used Barnes's dilator, which rendered the cervix simply tense and tended to excite normal uterine pains. Under its use the cervix became soft, regular pains took place, and the dilator was expelled. If found necessary, it could be reinserted. He criticised severely the practice pursued by some accoucheurs of making traction upon the forceps during uterine pain, at which time the tissues were rendered rigid and were therefore in great danger of being ruptured by such a procedure. Traction should always be made during the intervals between pains.

Dr. S. T. HUBBARD thought that in the case of the statistics quoted by Dr. Forest an examination of the condition of the pelvic organs should have been made twenty days after confinement, and then, probably, in many of the cases where laceration had been found at the sixteenth day the wound would have been found to have healed. Fifteen or twenty drops of laudanum often prove of great benefit in certain cases of tedious labor.

ANOTHER AMERICAN MEDICAL WORK is to be read abroad. The *London Lancet* characterizes Prof. Lusk's recent treatise on Obstetrics as the best in the English language.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

STATED MEETING, THURSDAY, November 2, 1882.

The PRESIDENT, Dr. EDWARD L. DUER, in the chair.

PURPURA HÆMORRHAGICA.

DR. HENRY BEATES related the history of a child healthy for the first four months of its life, at which age it was attacked by thrush; ten days later an ecchymosis of purpuric character appeared on one leg, and a few days later spots of the same character appeared over the body; on the fifth day the stools were tarry, showing intestinal hemorrhage; a bronchial secretion was also stained with blood. On the seventh day a hemorrhage started from an abraded spot on the perineum. Various local styptics were applied to this spot, without success, until a red-hot needle was used as a cautery. On the tenth day a hemorrhage occurred from the canthus of one eye, and on the fifteenth day the child died from exhaustion. At the autopsy the internal organs were found quite exsanguine.

HEMORRHAGIC DIATHESIS.

Dr. WM. SAVENY related the history of a boy, 5 years of age, who had fallen and received a slight wound of the scalp from a nail sticking out of a post: it was a mere scratch, and did not need a stitch to hold it together, but it bled profusely. All sorts of domestic remedies, including cobweb, had been tried, without avail. The doctor finally succeeded with lint wet with Monsel's solution and continued firm pressure. A few days later the same boy fell off one step on to the floor; there was no external wound nor any loss of blood, but the side of the face was enormously swelled, from hemorrhage into the tissues. A course of iron and tonics has improved the boy's appearance, but he is still pale.

There were no evidences of hæmophilia in the family. The mother was pallid, had red hair, but did not lose much blood in labor.

Dr. HORACE WILLIAMS reported the case of an infant, aged nine days, who was attacked with purpuric spots over the body, and bleeding at the navel. To the latter were applied successively styptic colloid, tannin, Monsel's solution, Monsel's salt in powder, and finally transverse pins and figure-of-eight ligatures; but the bleeding reappeared as soon as the latter came away, and the child finally died from loss of blood.

Dr. R. A. CLEEMANN had under his care a young man who had previously suffered from profuse hemorrhage for two days, consequent on the extraction of a tooth: the hemorrhage was finally stopped by Dr. Hartshorn, who plugged the cavity with a styptic. Dr. H.

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advised the young man never again to run the risk of a hemorrhage of any kind, as it would probably prove fatal. Recently he had been suffering severely from a toothache, which nothing but extraction could relieve. Dr. Cleemann put him on gallic acid internally, and tannic acid locally, for two weeks before the extraction, which was accomplished without any unusual loss of blood.

In a case of nasal hemorrhage, the anterior and posterior nares were plugged, but then ecchymoses appeared around the eyes and the plugs were removed; transfusion of a few ounces of blood was employed, and the hemorrhage ceased and did not return. The patient died three months later of phthisis.

Dr. E. L. DUER commended erigeron, or fleabane, when used internally, to stop hemorrhage. The oil may be given in doses of ten drops every ten minutes until the bleeding is checked, after which it may be continued at longer intervals until the tendency has passed away.

Dr. GITHENS confirmed these statements as to the value of this remedy.

REVIEWS AND BOOK NOTICES.

A PRACTICAL TREATISE ON DISEASES OF THE SKIN. By LOUIS A. DUHRING, M.D., Professor of Diseases of the Skin in the Hospital of the University of Pennsylvania, etc. Third Edition, revised and enlarged. Philadelphia, J. B. Lippincott & Co., 1880. 8vo, pp. 685.

This edition of Prof. Duhring's well-known work has, like the previous one, though following it only by a twelvemonth, been critically revised. The chapter on the anatomy and physiology of the skin has been rewritten and elaborated, recent studies in microscopic anatomy demanding the change. The work, as a whole, has been considerably enlarged, almost every page bearing the evidence of the author's painstaking and laborious revision. We are glad to observe the brilliant success of this epoch-marking work, which is testified by the simultaneous appearance of French and Italian translations, as well as by its general use in this country. The change wrought in a decade by Duhring and other of our American dermatologists is a subject of sincerest congratulation to all who rejoice at the progress of rational medicine. The former complicated nomenclature, in which sixty terms were in use to designate one disease, has given way to the simplicity of the dermatology of to-day, in which scarcely more than twice that number suffice to describe all known diseases of the skin.

In diagnosis and treatment, also,—the two most important points in the practical study of diseases of the skin,—Prof. Duhring's book is not merely up to the times, but it leads; for there are various methods of treatment brought forward here which have hitherto appeared only in special journals and transactions, or which have been derived from the author's personal experience. The student and practitioner can find no better guide to the treatment of skin diseases than Duhring's Treatise.

A SYSTEM OF HUMAN ANATOMY, INCLUDING ITS MEDICAL AND SURGICAL RELATIONS. By HARRISON ALLEN, M.D. Philadelphia, H. C. Lea's Son & Co., 1882.

It has been known by the personal friends of Dr. Allen, and indeed by a much larger circle of the profession, for many years, that he was engaged upon a work upon human anatomy which in completeness should attempt to be absolute. The idea of the author has been, in the first place, that everything should rest upon personal examination and verification,—not a copying from some other book,—and that the illustrations should all be actual representations of dissections, and not diagrams; in the second place, that by a very thorough ransacking of medical literature cases and references should be acquired to illustrate all anatomical points in their practical relations. The first of the two parts which have so far reached us is taken up by an excellent *résumé* of human histology by Dr. E. O. Shakespeare; in the second part Prof. Allen considers the bones and the joints. We have carefully looked over this Part Second, and find that the ambitious programme the author set himself has been laboriously and fully carried out; and we know of no anatomical treatise that can compare with the promise of this early portion of the book. If any one wish hastily to get an idea for himself as to the scope and character of the work, let him look at the article "Axilla," and we think he will conclude that he must have the whole work in his library for leisurely study and for frequent reference.

The completed volume will be a remarkably handsome quarto of five hundred and fifty pages, with one hundred and nine plates, containing three hundred and eighty figures, and two hundred and fifty wood-cuts in the text. The subscription price is $21.00 ($3.50 a part).

THE PHYSICIAN HIMSELF. By D. W. CATHELL, M.D. Baltimore, Cushings & Bailey, 262 West Baltimore St., 1882.

In this brochure Dr. D. W. Cathell considers the arts of success, other than those based upon professional skill, in a manner which is both shrewd and amusing. The tone of the book is of necessity a low one. Its idea is that, in all his acts, the first thought of the doctor should be, How can I lead that man whom I am meeting to consult me, and, when I get him thus far, how can I hold him?—and that he should never allow himself a straightforward, honest acting out of his own personality. A physician who follows Dr. Cathell's

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advice undoubtedly may expect success, but he becomes in verity a slave to his profession or to his own desires for practice; and for eight dollars a day, the sum mentioned as an ordinary maximum average of receipts by Dr. Cathell, the game is not worth the candle: better, if necessary, to pinch until a thousand dollars are saved, go to Dakota or other wild region, take up land, and be honest and independent.

SYPHILIS. By PROF. V. CORNIL. Translated, with Notes and Additions, by Dr. J. HENRY C. SIMES and Dr. J. WILLIAM WHITE. Philadelphia, H. C. Lea's Son & Co., 1882.

The book of Cornil is known as one of the standard treatises upon syphilis, and Drs. Simes and White have, by their smooth, flowing translation, put under obligations that portion of the Anglo-American profession that does not read French comfortably. The notes and additions seem to us very judicious. The typography and illustrations are very good.

GLEANINGS FROM EXCHANGES.

TETANUS AND TETANOID CONTRACTIONS AFTER LABOR.—A case of obstetrical tetanus occurring at the Maternity Hospital, New York, is reported by Dr. Henry J. Garrigues, in the *American Journal of Obstetrics and Diseases of Women and Children* for October, and a careful review of the history of the subject is added, with tabulated lists of cases. The paper, however, is not merely devoted to puerperal tetanus, but considers tetanus and tetanoid spasms in their relation to any period of pregnancy, parturition, and lactation. Although described by the ancients, the disease does not receive much attention in our systematic treatises, because true tetanus is in America and Europe a very rare complication of the puerperal state, but, on the contrary, it is said to be very common in India. A hot climate is considered a predisposing element, and colored races are more liable to be attacked than white. As showing that infection has little to do with its causation, the fact is noted that it occurs more frequently in the country than in the city. Advanced age is a predisposing factor, and it seems especially that abortion in later years is dangerous. The liability after parturition decreases after the first pregnancy, that after abortion steadily increases with the number of pregnancies. Mental excitement, but especially hemorrhage (and of the form connected with retained fragments of placenta), early exposure to wet and cold, are named among the causes.

The symptoms do not differ from those of tetanus produced under other circumstances. It is of short duration and not infrequently fatal. Tetanoid symptoms, on the contrary, may be of hysterical or uræmic origin, are irregular in their course, and rarely dangerous. If due to uræmic, rheumatic, or malarial toxæmia, the treatment will vary greatly from true tetanus, for which the administration of narcotics and antispasmodics is especially indicated. Chloral, bromide of potassium, or nitrite of amyl, and other remedies, are approved; the use of ice-bags to the spine, when the temperature is high, laxatives if constipation exists, disinfectant intra-uterine injections, and the use of a nourishing and stimulating diet, are chiefly recommended.

HYSTERICAL SPINE.—There is a form of backache in which, according to Dr. Vincent (*Medical Press and Circular*), pressure does not increase the pain, but rather relieves it. There is no tenderness elicited by pressure with the open hand along the spine, but, on the contrary, if the finger be drawn lightly along the spinous processes, marked evidences of pain are noticed. On tapping the spine with the finger, the same cringing and flinching of the patient will occur, enabling the soreness to be localized. This is very apt to be in the lumbar region, especially if any uterine irregularity exist. There is great weakness of the muscles accompanying this condition, and the back is limp and bent. The prognosis is good, especially in the younger cases. Support, systematic exercise with the trapeze, the cold douche to the spine, or with the sponge, followed by friction, and moral treatment, are especially relied upon. Drugs are of little use, but the bitter and more unpleasant mixtures are preferred, in order to supply the patient with an inducement for getting well.

WHOOPING-COUGH.—At the last meeting of the Medical Society of London Dr. Dolan read an abstract of a paper on the pathology and treatment of whooping-cough, for which he had received the Fothergillian gold medal of this Society. Dealing with some points of pathogeny, he expressed his dissent from the view of Guéneau de Mussy, that the malady was a bronchial adenopathy, its chief symptom being induced by pressure on the vagus by the enlarged glands, and showed that this glandular enlargement was not always present in pertussis, and, further, that the glands may be swollen without producing the characteristic cough. The disease, indeed, bore much resemblance to those diseases the causes of which are now believed to be minute organisms or fungi. Its highly contagious nature, period of incubation, effervescence and defervescence, its regular course, and the immunity from subsequent attacks, were grounds of analogy determining the place of pertussis in the group of diseases caused by protophytic fungi. The attempt by Linnæus to prove that all diseases were produced by animalcula, or had an insect origin, foreshadowed the conclusions now arrived at by the discoveries of

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Pasteur. In 1867 Poulet found bacteria in the sputa of pertussoid patients, and Letzerich had induced whooping-cough in rabbits by inoculating the trachea with sputa from the human subject. The author had repeated these experiments, and found that whilst inoculation with the blood of whooping-cough patients was without effect, that of sputa and other secretions caused death. He had found also, on microscopic examination of sputa, ordinary bacteroid forms and a microbe resembling the Spirochæte plicatis of Cohn. The application of special methods of staining, as employed in the detection of the Bacillus tuberculosis, would no doubt reveal the special microbe of pertussis. Admitting the fungoid nature of pertussis, its contagious property was easily explained by germs being thrown off into the air and received into the body, setting up constitutional disturbance, and subsequently attacking the pulmonary epithelium, giving rise to all the phenomena of pertussis. No pathognomonic lesions could be detected on post-mortem examination, for the simple reason that whooping-cough was rarely fatal. Death resulted from complications which were very numerous. As to glycosuria in whooping-cough, he had found it present in fourteen out of fifty cases. Turning to the question of treatment, he pointed out the necessity for measures of isolation in preventing the spread of the disease, for the enforcement of which measures the co-operation of all classes of the community was needed; and, although the course of the disease could not be controlled by treatment, the patient could be placed in the most favorable circumstances towards recovery; certain painful and prominent sources of trouble could be relieved, and complications guarded against, so as to assist nature in her efforts to throw off the disease. There is no panacea or specific remedy; but if the dependence of whooping-cough upon a specific virus be the true explanation of its pathogeny, the lines on which its rational treatment and prophylaxis are to be pursued become clearer and more hopeful.—*Lancet.*

DISTENTION OF THE RECTUM TO FACILITATE OPERATIONS UPON THE PELVIC VISCERA BY LAPAROTOMY.—At the recent meeting of the British Medical Association, Dr. Garson presented a brief communication showing the advantages of distention of the rectum by water only, or by water contained in a rubber bag. In a section of a frozen body it was found (the bladder being also distended) "that the bladder was entirely raised up out of the pelvic cavity, and along with it the peritoneum also, both in front and behind; so that the bladder occupied much the same position that it does in the new-born child." On comparing this section with a normal one, it was found that the distance of the internal orifice of the urethra behind the symphysis pubis remained equal, so that the displacement of the bladder evidently took place in a plane parallel to that of the symphysis. The dislocation of the bladder was produced, not by raising of the perineum, but by stretching of the urethra in its so-called fixed parts. The prostate was stretched to nearly double its ordinary length, and was flattened. The membranous portion of the urethra was not quite so much stretched, but was considerably longer than usual. The position of the peritoneum in front of the bladder is expressly noteworthy. As a rule, when the bladder is filled to the same extent that it was in this case, the peritoneum is only elevated above the symphysis pubis a few millimetres; but in the section there was, between the upper border of the symphysis pubis and the peritoneum, a clear space of four centimetres,—a space which would have admitted of the extraction from the bladder of a very large stone by the supra-pubic method, without injury to the peritoneum. The results obtained in this section were confirmed by subsequent observations of a similar kind on other subjects, and in some cases the distance between the symphysis pubis and the peritoneum was greater, being as much as six centimetres in one subject, where the bladder was even filled with a less quantity of water (200 grammes). By varying the quantity of water injected into the bladder and rectum, it was found that the internal orifice of the urethra was not altered as to its distance behind the symphysis, but its distance from the plane of the conjugata vera varied according to the state of distention of the rectum. The depth of the peritoneal pouch behind the bladder is always diminished by distention of the rectum.

This procedure may not only prove of service in the operation of supra-pubic lithotomy (in which it has already been utilized by Trendelenburg, of Rostock), but also in operations upon the uterus or its appendages during laparotomy.

PUERPERAL FEVER.—In the *Edinburgh Medical Journal* for October is contained an interesting and short paper by Mr. John Lowe, on "Puerperal Fever: its Treatment and Prevention," in which occurs the following judicious expression of views in regard to treatment:

"I am strongly of opinion that by early and repeated aseptic intra-uterine injections, a rapidly acting cholagogue, washing out the bladder, if necessary, with some aseptic solution, and the timely and liberal use of stimulants, will avert death in many instances. It is no use giving the nurse instructions to wash out the uterus; we must do so ourselves by means of a long tube in the uterine cavity itself. Ammonia and brandy I regard as the medicines for the disease; indeed, when food is refused, brandy is not only most grateful to the patient, but is peculiarly well adapted to supply the place of ordinary food, and no

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amount of fever or other symptom contra-indicates stimulation when changes so destructive to the vital fluids and tissues of the body are in terribly rapid progress. To give aconite or veratrum viride in such cases is, in my opinion, as unscientific as it is useless; and yet these remedies have been vaunted and are actually used by men of undoubted ability and eminence. To get rid of a fermentative poison from the blood, we must adopt some such practice as I have indicated, and not stop to theorize about the physics of the circulation. We must, in other words, support vitality and eradicate the poison. That salicylates and sulpho-carbolates taken internally do not rectify the turbid urine in puerperal fever I am convinced from experience; and I would strongly urge that all depressant remedies are both hurtful and dangerous."

The use of carbolic spray, and irrigation of the uterus and vagina with carbolic solution, immediately after labor, are considered important means for the prevention of puerperal septic poisoning.

OPERATION FOR VARICOCELE.—In the *Lancet* for September 30, Mr. Barker describes a simple operation for varicocele which he had carried out successfully in three cases. The operation is evidently a radical one, and, with the antiseptic precautions, causes much less inconvenience or trouble to the patient than the usual methods. It was prepared as follows:

The skin of the scrotum was thoroughly cleansed with a five-per-cent. carbolic lotion, as also all instruments and the surgeon's hands, no spray being used. The scrotum was then pinched up between finger and thumb in the usual way, so as to include the veins and exclude the vas deferens; it was then notched with a scalpel, and through the opening thus made a needle bearing a medium-sized twisted silk ligature (previously soaked for about an hour in the same carbolic solution) was passed. The veins were then allowed to slip backwards, and the needle was made to carry the silk forward again through the same puncture, but this time in front of the veins. The latter were thus, of course, included in the two loops of silk leaving the scrotum by the same aperture. The ends of these were now tied tightly over the veins about one-eighth of an inch apart. They were then cut short and allowed to slip into the scrotal tissues. Everything was in the mean time protected from any contamination by frequent wiping with a carbolized sponge. A little padding of salicylated wool was the only dressing.

THE PARASITIC ORIGIN OF VESICAL CALCULI.—According to Dr. Zancarol, of Alexandria, the prevalence of distoma hæmatobium as a trematode parasite among the Arabs frequently leads to the formation of calculi in the bladder. The usual habitat is the portal vein, but the ova, which are shaped like cucumber-seeds, may appear in the urine as well as in the fæces. Their number is prodigious, and, deposited in the portal system of veins, they accumulate in the vesical veins, and thence find their way into the submucous tissue of the bladder in such considerable masses that at places the mucous membrane ruptures and so gives rise to frequent and intractable hemorrhages. These infiltrations in the submucous tissue and in the reticulum of the mucous membrane lead to subacute and chronic changes, to villous and fungoid vegetations, which, from their favoring the decomposition of the urine, become coated with calculous incrustations of considerable extent. The bladder, as it thus becomes thicker, loses its elasticity. The incrustations detach themselves in places, agglomerate together, and so form the nucleus for a calculus, which then enlarges by successive layers deposited on its surface. On some occasions the external membranes of the ova have been found in the centre of a calculus as its nucleus.—*Medical Times and Gazette.*

THE MICROSCOPE IN DIARRHŒA.—A number of cases of diarrhœa occurring together, when hot weather had been followed by rain, the epidemic was studied by Mr. K. W. Millican (*Lancet*) with the aid of the microscope. A short period of incubation occurred, during which the patients were depressed and out of sorts, and this was followed by a prostrating attack of diarrhœa. The stools were fluid, not unlike those of typhoid fever, and contained in every instance small gelatinous or albuminous lumps like half-cooked white of egg. The odor was extremely offensive. Beyond the prostration, however, and general gastric disturbances, with excessive flatulent distention and pain, there were no constitutional symptoms. In no case was there any marked rise of temperature, nor was the pulse greatly affected.

The lumps of gelatinous material were submitted to microscopic examination, with the result of detecting large numbers of bacteria, in granules, short fine rods, long fine-pointed rods, and curled twisted ones; and also mycelial threads. The method of examination pursued was to allow some of the gelatinous material to dry on the slide, float it on aniline blue solution until stained, then wash with nitric acid, and finally in distilled water; the slide was then dried, and mounted in Canada balsam. The $\frac{1}{2}$ or $\frac{1}{4}$ inch objective was sufficient to detect these organisms.

KNEE-CHEST POSTURE FOR DISLODGING LOCKED TWINS.—A new procedure for dislodging locked twins is described, with an illustrative case, by Dr. T. S. Galbraith, of Seymour, Indiana, in the *American Journal of Obstetrics*. Being summoned hastily to a case of difficult delivery under the charge of

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a midwife, he found a child delivered, except its head, which, with the chin extended, was in the right oblique diameter of the pelvis. The head of another child was also found occupying the cavity of the pelvis, presenting with its occiput to the front, and was driven down so firmly as completely to bar the further progress of the labor. With the patient on her back, the second head was immovable, but on causing her to assume the knee-chest posture the attendant found himself able to push it out of the way by introducing his hand, and a few seconds later the first child was delivered still-born; the second was delivered with the forceps, and survived. This case was originally reported in the *American Practitioner* for May, 1880, but is now republished with a wood-cut. The advantages of this procedure over the ordinary treatment in the text-books is very obvious.

PHYSIOLOGICAL EFFECTS OF HYOSCYAMIA.—Dr. H. A. Hutchinson, of Pittsburg, contributes (*Alienist and Neurologist*) his personal experience with Merck's hyoscyamine, of which he took one-fourth of a grain in order to test its hypnotic effect while in a good state of health. His feelings are thus graphically described:

"Immediately I noticed a decided dryness of the mouth and throat, and almost a total absence of saliva, and difficulty of deglutition. Looking in a mirror, I noticed an intense congestion of my head and face, the carotids throbbing violently with every impulse of the heart. Along with this there was acceleration of the pulse and respiration, accompanied by a feeling of numbness extending over the entire body, with loss of power in producing the ordinary movements of coordination. I made an effort to 'walk it off,' but soon found my feet becoming so enfeebled that I could only walk by fixing my eyes intently on the ground. Had any one noticed me at this time, I should have had some difficulty in establishing the fact that I was not deeply intoxicated. Finding that exercise would not relieve me from the poisonous effects of the drug, I, with much exertion, ascended the stairs to my room for the purpose of retiring to bed.

"My mental faculties up to this point were intact, and I fully realized my unpleasant position, but had no fear of any fatal result. Indeed, I was entirely oblivious to everything, past, present, or future, and cared little for anything except sleep. So imperative and overwhelming was this demand, and the general helplessness of my limbs so rapidly increased, that I was only able to throw myself upon the bed without undressing, and was soon in a deep slumber or coma, which lasted eleven hours. During this period I have no recollection of anything. I was not disturbed by any delusion or dream, or conscious of the presence of any one or of my own existence.

"Medical friends who were present with me during those eleven hours, alarmed at the profound stupor in which they found me, and not knowing I had been experimenting with hyoscyamine, resorted to every expedient to bring me out of what they supposed an apoplectic coma. Resort was had to sinapisms, dry cupping, application of cold to the head, flagellation by wet towels, etc.; but all efforts were unavailing to awaken me, or produce any evidence of consciousness.

"I am told that during this prolonged sleep there was entire relaxation of all the voluntary muscles, except occasionally some spasmodic movements of the arms and legs; the pulse ranging during the first few hours at 138, full and hard; respirations numbered thirty-four to forty, and temperature 106° F.

"As the narcotic effects of the alkaloid passed away, the pulse rapidly fell to 106, temperature declined to 99°, and the respirations were reduced in frequency; but consciousness did not return for several hours after this.

"When I did regain consciousness, I had great difficulty in collecting my thoughts or concentrating my mind on any particular subject. There were no hallucinations, delusions, or illusions, but for twenty-four hours or more every object on which I looked was tinged with yellow.

"It seems that during the period of sleep I suffered more or less from nausea, and at one time vomited, although I had not the slightest recollection of having done so."

For several days after his recovery the pupils were very considerably dilated, and he was annoyed with double vision and a general arrest of the various secretions of the body, as well as the excretions from the skin.

APHORISMS ON TREATMENT OF DISEASES OF THE EYE.—Dr. Chisolm, chairman of the Section of Ophthalmology at the recent annual meeting of the Medical and Chirurgical Faculty of Maryland, lays down these aphorisms: (1) Do not blister, in nine cases out of ten it is useless torture; (2) do not use nitrate of silver, in not one case out of fifty is it beneficial as generally prescribed; (3) do not use acetate of lead, for fear of leaving lead-marks on the cornea; (4) weak astringents are the best remedies for affections of the mucous surface, combined with absolute cleanliness; (5) use weak solutions of eserine for corneal affections; (6) atropic solutions are essential for breaking up recent iritic adhesions; (7) when in doubt, call in a specialist. Eserine, he observes, is beginning to play a very conspicuous part in a great number of eye-diseases, supplanting atropia to a great extent. The strength of its solution is one part in two hundred parts of water. A drop of this in the eye on rising will, in photophobia and commencing presbyopia, sharpen the eye for vision for reading during the day. It is effi-

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cacious in all cases of increased tension of the eye, of which glaucoma is the type. In all corneal affections eserine has taken the place of all other remedies.—*Boston Journal of Chemistry.*

THE MICROBE OF TYPHOID FEVER.—From the careful researches, extending over eight months, of Dr. Almquist, of Stockholm, recorded in the *Nordiskt Medicinskt Arkiv*, he has arrived at the following opinions. The bacterium of typhoid develops principally in the intestinal wall; it occurs only by accident in the blood, and only in very small numbers ordinarily. Where more are found, they appear to be composed of bacteria, which, after having formed thrombi in the blood, have become broken into particles. Six forms of bacteria are figured. From the researches thus far, he believes that the microbe which he describes cannot strictly be classed among the genera bacillus, micrococcus, or bacterium, but that the series of development comprises the following phases. The spore shoots forth a thread; several threads then form a net-work, or mycelium, or a zooglœa of threads. If the spores are completely formed in the threads, then the zooglœa of threads may be transformed into a zooglœa of delicate grains. These conclusions are not final, as Dr. Almquist is still pursuing his researches.

IODIDE OF POTASSIUM IN FRONTAL HEADACHE.—Dr. Haley states, in the *Australian Medical Journal*, that for some years past he has found minimum doses of iodide of potassium of great service in frontal headache. A heavy, dull headache, situated over the brow, and accompanied by languor, chilliness, and a feeling of general discomfort, with distaste for food, which sometimes approaches to nausea, can be completely removed by a two-grain dose dissolved in half a wineglass of water, and this is quietly sipped, the whole quantity being taken in about ten minutes. In many cases the effect of these small doses has been simply wonderful. A person who, a quarter of an hour before, was feeling most miserable and refused all food, wishing only for quietness, would now take a good meal and resume his wonted cheerfulness. The rapidity with which the iodide acts in these cases constitutes its great advantage.—*Boston Journal of Chemistry.*

TREATMENT OF MALIGNANT PUSTULE.—A shepherd, suffering from malignant pustule of the face, was treated in the ordinary way, without checking the progress of the disease. Tincture of iodine was then given internally, antiseptic washes being continued. Hypodermic injections of a two-per-cent. solution of tincture of iodine were also administered around the zone of inflammation, and subsequently into the œdematous region. The next day the delirium as well as the sweats and chills had disappeared, and the pulse was stronger. An inflammatory circle was visible around the eschar. A continuance of the treatment resulted in a complete cure.—*La Revista de Méd. y Cirugía Pract.; The Practitioner.*

PITYRIASIS AND ITS PARASITE.—M. Vidal gives a *résumé* of his observations on the affection of the skin described by him under this name. The eruption begins by small rose-colored spots, scarcely raised above the level of the skin. Their surface is dry and slightly scaly. The spots are irregularly distributed, usually beginning on the trunk, but occasionally extending to the arms and thighs. They extend slowly. M. Vidal believes that he has discovered a special parasite in this affection, consisting of very minute spores, averaging a thousandth of a millimetre in diameter. The extreme smallness of the spores and their irregularity in size have induced M. Vidal to name the parasite *Microsporon anomœon* or *dispar.*—*Annales de Dermatologie et de Syphiligraphie*, vol. iii. No. 1; *Practitioner.*

SUCCESSFUL NEPHROTOMY.—An interesting case is mentioned, in an address by Mr. T. R. Jessop, of a female patient suffering with marked evidences of renal disease. Purulent urine was being painfully squirted every few minutes from an intolerant bladder. Physical examination of the patient's abdomen, loins, and pelvis, and chemical and microscopic examination of the urine, revealed no more than the single fact of purulent urine. In the hope of relieving her most distressing symptoms, he resorted to the operation of dilating the neck of the bladder; and when, after its completion, the forefinger was swept round the interior of the viscus, he was struck by the fact that the left ureter could be felt in the wall of the bladder as prominent and as firm as a piece of whipcord, whilst the orifice of the right could with difficulty be made out. Immediately it became clear that the mischief was seated in the left kidney, and with perfect confidence the steps for nephrotomy were taken; the kidney was exposed in the loin, its substance was incised, and from its pelvis there exuded from two to three ounces of offensive pus, the evacuation of which, as the event has shown, proved to be the initial step in an uninterrupted recovery.

HOW TO MAKE A POULTICE.—By making a flat flannel bag, in size say twelve inches by eight inches, with one side longer than the other, so that it may fold over the open end like an envelope, according to Lauder Brunton in the *Practitioner* (October, 1882), a valuable means of applying moist heat is furnished. Linseed meal being prepared in the ordinary way with boiling water, the desired quantity of the mass is next introduced into the bag, the flap being then fastened with a few stitches. One or two folds of flannel may be

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laid between this and the skin; and tapes may be fastened to the four corners to keep it in place. The advantages of this form of poultice are that it may be applied boiling hot without burning the skin, it does not need frequent renewal, it is cleanly, and it is very efficient, especially for the relief of spasmodic pain or abdominal cramps, or in inflammation of the thoracic or abdominal viscera. It is not intended to supersede the ordinary form where the poultice is intended to act directly on the surface, as in wounds, ulcers, and abscesses, but its usefulness is more apparent in medical cases.

A SIMPLE MEANS OF CHECKING PULMONARY HEMORRHAGE WITH SHAWL-STRAPS.—Dr. H. Holbrook Curtis gives, in the *New York Medical Record*, a novel way of arresting pulmonary hemorrhage. Called in a case of emergency, Dr. Curtis purchased a pair of ordinary shawl-straps punched with holes a quarter of an inch apart, and braided three strands of drainage-tubing, making two cords of as many feet long. He laid a folded napkin over each femoral vein just below the fold of the groin, and adjusted the straps about the thighs as high up as possible, so that the buckles would be over the napkins. The straps were tightened enough to stop the venous return without interfering with the arterial supply of the extremities. Then the arms near the shoulders were bound by the rubber tubing. The hemorrhage was checked almost immediately, and in about five minutes the straps and tubing were loosened. This was no sooner accomplished than the patient complained of a great shock to "the sore place," and the bleeding recommenced. The same procedure checked it as before. In about five minutes, the extremities becoming markedly cyanotic, the straps were loosened, a hole at a time, when no hemorrhage recurred. The shallow and difficult respiration was greatly relieved by keeping an arm and the opposite leg strapped. As soon as a member became cyanotic, the strap was changed to the opposite side.

TRANSPLANTATION OF MUSCLE.—Dr. Helferich, of Munich, after the removal of a large fibro-sarcoma from the biceps muscle of a woman, aged 36, refilled the gap left vacant with a freshly-cut piece of muscle taken from a dog, fastening the same with six lower and thirty upper catgut ligatures. A cure followed the antiseptic treatment. The patient can now readily flex and extend the arm. An electrical examination instituted by Ziemssen did not show any abnormality, and it appears, therefore, that the transplanted muscle has retained its vital function.—*Berliner Klinische Wochenschrift*, No. 26, 1882.

M. PASTEUR demonstrated, two years since, that fowls contracted charbon only when their temperature was lowered, their normal temperature being 111° Fahr. M. Paul Gibier has recently determined that frogs contracted charbon when under the influence of relatively high temperature. He placed twenty frogs in tepid water, and inoculated them with charbon virus. Five of them contracted the malady. Their blood indicated the presence of bacteria. These elements were larger than those observed in the bovine and ovine species. Guinea-pigs and rabbits were inoculated with the blood of the frogs, and contracted charbon.—*British Medical Journal.*

RECOVERY FROM BROKEN NECK.—A case of fracture from direct violence of the laminæ of the fifth and sixth cervical vertebræ, without dislocation, followed by recovery, is reported to the *Lancet*, October 21, by Mr. C. Jordison. Paralysis of the left arm, also, though not complete, in the left leg and right arm, appeared at once or very early in the case. The arms were again paralyzed about the fourth week,—probably due to the pressure of the callus on the roots of the brachial plexus. There was also marked atrophy of the muscles, especially of the left hand and arm and the pectorals; and intense hyperæsthesia. Complete rest was required for several months, but in the sixteenth week the patient was riding horseback, and by the twenty-fifth had entirely recovered, except slight weakness in the left arm.

INTESTINAL OBSTRUCTION RELIEVED BY MASSAGE.—Dr. Bitterlin reports a case of intestinal occlusion accompanied with much pain, vomiting of fecaloid matter, hiccough continuing in spite of treatment for eight days, finally relieved by kneading and malaxation of the belly. The manipulation was very painful. Some instants after, violent colic came on, and gurglings, the bowels shortly afterwards moved, and the patient recovered. Dr. Bitterlin mentions a second case in which he was called in consultation, where the same treatment was followed by the same happy results.—*L'Union Médical.*

LYCOPERDON GIGANTEUM AS A HÆMOSTATIC.—In Ireland the giant puff-ball is popularly used as a hæmostatic and surgical dressing. Dr. E. Thompson reports (*Lancet*) a case of open cancer of the breast that experienced much relief, not only from lessening of discharge, but also decrease of pain after its use, so that the general health improved and the patient lived for seventeen years afterwards.

TREATMENT OF RINGWORM OF THE SCALP.—Dr. Adler Smith recommends oleate of mercury with ung. petrolei (ten per cent.) in chronic cases of tinea of the hairy scalp. This causes less irritation than the ordinary preparation, and children bear it well, although if the cases are under seven years of age it may be found necessary to dilute it further.—*British Medical Journal.*

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PROSTATORRHŒA AND SEMINAL LOSS.—Dr. Campbell Black divides prostatorrhœa into two forms, the discharge in one being characterized by the presence of spermatozoa, while in the other this element is wanting. Prostatorrhœa, with seminal loss, may be excited by any condition determining vascular plethora in the pelvic viscera, not necessarily dependent upon urethritis, but possibly secondary to passive congestion of the prostate and adjacent organs.—*Lancet.*

POMADE FOR COMEDONES.—Kaolin, four parts; glycerin, three parts; acetic acid, two parts, with or without the addition of a small quantity of some ethereal oil. With this pomade Unna (*Virch. Archiv*) covers the parts affected in the evening, and, if need be, during the day. The comedones can be easily expressed after several days, most of them coming out by washing the parts with pumice-stone soap.

DR. LAMALLERÉE, of Paris, is said to have successfully used the particles taken from the skin of the rabbit for skin-grafting, with complete success. This is the more important as M. Féréol, also of Paris, has recently added another to the list of cases in which syphilis has been conveyed by skin-grafting.

LITHOLAPAXY IN ENGLAND.—A stone weighing over two ounces was removed by Reginald Harrison from a man 27 years of age, by the use of a smooth-blade lithotrite and Bigelow's aspirator. The patient recovered, and an examination of the bladder gave no further evidence of calculus.—*British Medical Journal*, October 7.

ANÆSTHESIA OF THE PHARYNX.—According to M. Cozal, painting the mucous membrane of the pharynx with the tincture of coca will secure anæsthesia of the part. If this be true, the result is probably due to the alcohol.

MISCELLANY.

EUCALYPTUS-CULTURE.—The success of the Trappists in the cultivation of the eucalyptus in the neighborhood of Rome, and the improved sanitary state of what was formerly a terribly malarious region, have been widely commented upon. A writer in the *Revue des Eaux et Forêts* gives some interesting details. The experiment was begun in 1870, by planting some of the seed in a highly malarious region, about one and a half English miles out of the Porta di San Paolo. At the beginning, the monks were obliged to return to the city to sleep at night, but at the end of five years, when the trees around their buildings had attained some size, they found the salubrity so increased that they could sleep there unharmed. These results coming to the notice of the Italian government, arrangements were made for establishing, under the care of the Trappists, an experimental farm at Trois Fontaines, for the reclamation and improvement of certain adjacent lands by convict labor. The results now are announced as fully satisfactory, and the success is in marked contrast with the failures in other parts of the Campagna and in private gardens within the city. The agreement with the government stipulated that twelve thousand five hundred trees should be set out annually, and this number was exceeded in 1880 and 1881. Most of the trees are reported as doing well, and there is no question as to the fact of their anti-malarial influence, whatever may be the proximate cause.

The country in this region is flat, the soil principally clay and rocky, and water is found at the depth of eighteen inches to three feet. The trees are set out in two-feet trenches, about three hundred and sixty to the acre. They require a good deal of water. The seed is sown in light, open frames, in soil of the kind in which the trees are eventually to grow. When two to four inches high, the seedlings are picked out, at distances of four inches apart each way, in boxes holding forty plants each. In these they are housed under glass during the winter. This protection is not indispensable except in unusually severe weather, but the plants are better for being spared. They are set out in April, after the frosts are over. Each plant requires one and a half to two gallons of water weekly during the hot months after planting. Sulphuring is also necessary to keep off the insect pests. At Trois Fontaines, wheat, oats, maize, or rye is sown between the trenches when the trees are planted, and, after this is cut, sheep are turned into the stubble, as the bitterness of the leaves is sufficient protection to the plants. *Eucalyptus globulus* and *E. resinifera* are the predominating species; the latter is more valuable, as it seeds after the fourth year, whereas the former does not seed until its fifteenth year, when the increased size of the tree renders the collection of the seed a more formidable task. Trials are also to be made of the *E. amygdalina*, the only eucalyptus which stood the winter of 1879–80 in Upper Italy, and the *E. melliodora*, so called from its sweet odor, the hygienic value of which, however, is not esteemed as highly as the other species. Great differences have been noticed in the rate of growth, and possibly in the activity, of different varieties. The Trappists use the bark for tanning, and manufacture a liqueur from the leaves, which, with the seeds of the trees, is now bringing in some revenue.

Mr. H. M. Chichester, commenting upon the above in the *Journal of Forestry*, insists upon the great attention required to the young plants, securing healthy seedlings, and looking well after them when first planted out, especially as regards regular

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watering. The balsamic emanations are most redundant at a temperature of 68° F., or above; in winter their presence in the atmosphere is imperceptible. The conclusion appears to be that their value will be most evident in those countries where the malarial influence is most malignant during the summer heats, when the functional vigor of these trees is in its fullest activity. This is the case in the Mediterranean countries, where the hygienic value of the eucalyptus has been established, as at Trois Fontaines, and in Corsica; and he inquires, "Does this fortunate coincidence obtain in respect of all the miasmatic and malarious sites where eucalyptus-planting has been tried or proposed as a panacea?"—*Physician and Surgeon.*

THE CULTIVATION OF PERSIAN INSECT-POWDER.—Jamtiloff, an Armenian, recognizing the value of Persian insect-powder, ascertained its source, though he never undertook its manufacture; but in 1828 his son began to put large quantities on the market, and it has since become an important article of trade. The variety then used was *Pyrethrum roseum*, the *Pyrethrum cinerariæfolium* not being known until later; and now still other varieties are known to possess similar qualities. In Dalmatia, where it is largely cultivated, the insect-powder comprises several varieties; but the pyrethrum grows wild in the Russian province of Transcaucasia. The cultivation of the pyrethrum was introduced into America about ten years ago, and it has since been cultivated usually—especially the *Pyrethrum roseum*—for ornament, but in some places for profit. Mr. G. N. Miles, of Stockton, California, has succeeded in raising plants from Dalmatian seed, and has made powder of excellent quality (Report of the Commissioner of Patents, 1861). Mr. P. Henderson, of New York, says that the plants are easily raised from seeds and cuttings. In France, according to Willemot, a fresh, dry, rather silicious soil is preferred, with a southern exposure. The seed is planted from March to April (even in February, if the weather permits), lightly covered, pressed down, and rolled. It must be wet every five or six days, and transplanted when the plants are large enough, and placed six inches apart. They blossom from May to September in the second season.

REDUCTION IN THE PRICE OF QUININE.—Ten thousand ounces of quinine were recently sold in this country for $1.47½ per ounce. The cause of this great fall of price seems to be chiefly the glutting of the market for cinchona bark with cupræa bark, although other factors are at work.

The manufacture of quinine throughout the world is in a few hands. The Boehringers, one of Milan, Italy, and the other of Mannheim, Germany, are the most prominent of all the European manufacturers, the annual production of the Milanese factory alone being 1,200,000 ounces, which is nearly one-third of the entire consumption of the world. The leading manufacturer in England is Howard, and in France Pelletier. In this country the two largest manufacturers of quinine are Powers & Weightman and Rosengarten & Sons, both of Philadelphia. Charles T. White & Co. and McKesson & Robbins, of New York, are also large manufacturers of the article. It is affirmed that the Italian firm is now endeavoring to destroy the rival manufacturers, with the expectation of afterwards raising the price when the monopoly has been secured. It seems that a London syndicate some time ago secured about 15,000 bales of cupræa and other barks at an extraordinarily low figure, and sold them to Boehringer, of Milan, at an advance of ten per cent., so as to offer a tempting opportunity to the grasping Italians. It is, however, to our thinking, impossible to crowd out firms like the large manufacturers of our city, whose quinine-works are only a portion of their establishments, and who therefore can simply suspend the manufacture of the cinchona alkaloids until more favorable times. It is evident that Congress should reinstitute the quinine duty, or else take off the duties upon soda, amylic alcohol, Indian barks, and other materials used in the manufacture.

A FELINE TEST FOR SEWER-GAS.—"An ingenious woman," says a Boston contemporary, "recently invented what may perhaps prove to be an improvement on the peppermint test for leaky waste-pipes. Noticing, and having used the peppermint test for, an offensive odor in the parlor of the house which she occupied, she suspected a defect in the waste-pipes, and sent to the agent to request that a plumber might be sent to examine them. The agent was incredulous, and refused. To make her proofs more convincing, the woman, after borrowing two cats from her friends, purchased some oil of valerian, and, stationing the animals in the parlor, went up-stairs and poured the valerian into the basin in the same way that the peppermint had been previously applied, and then descended to watch the result. Cats are extremely fond of the odor of valerian, and it was not long before both of them began to sniff the air and move towards the door of a closet through which the waste-pipe ran. The door was opened for them, and they immediately sprang upon a certain shelf, where they remained, purring with satisfaction. A third time the woman went to the agent, who, though still unbelieving, consented to send a plumber to make further investigations; and on cutting away the plastering so as to expose the pipe, a joint was found completely separated at the place which the cats had indicated."

THE AMERICAN PUBLIC HEALTH ASSOCIATION held its Tenth Annual Session at Indianapolis, on October 17, 18, and 19.

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Dr. R. C. Kedzie, of Lansing, President of the organization, occupied the chair and delivered a valuable address. The leading questions under discussion were vaccination, the National Board of Health, and contagious disorders. The resolutions from the Committee on Venereal Diseases, recommending the passage of laws to prevent the spread of contagious and infective diseases as recommended by Dr. Gihon, U.S.N., were tabled. Dr. Cabell read a report of the labors of the National Board of Health, which was well received, and a series of resolutions were adopted strongly endorsing the Board and urging its continuance and support. Owing to some misunderstanding, no social receptions were given to the Association. The officers for next year are—Dr. Ezra M. Hunt, of New Jersey, President; Dr. Albert L. Gihon, First Vice-President; Dr. J. E. Reeves, of West Virginia, Second Vice-President; Dr. J. B. Lindsley, of Nashville, Tenn., Treasurer; Drs. Thos. L. Neal, T. J. Turner, G. P. Conn, J. S. Billings, J. J. Speed, and H. D. Fraser, Executive Committee. Detroit was selected as the next place of meeting.

DISINFECTION WITH HOT AIR.—The value of hot air for disinfecting purposes depends, of course, on its power to destroy germs of disease. Koch and Wolfbeugel, from the German sanitary bureau, have made experiments in this direction, and found that air of a temperature of a little over 212° Fahr. cannot be endured by bacilli for over one and a half hours. Spores of mould-fungus are destroyed in an atmosphere of 230° to 240° Fahr. inside of one and a half hours. Spores of bacilli require a temperature of 284° for over three hours to be effectually destroyed. It appears that it requires a long time for hot air to penetrate into objects of disinfection. Small objects, pillows, bundles of cloth, were not completely disinfected after having been subjected to hot air of a temperature of 284° for three hours. Those objects are also considerably damaged by being subjected to such conditions.—*American Chemical Review and Journal for the Spirit, Vinegar, and Sugar Industry.*

ALTHOUGH there are four hundred thousand people in South London, there are but two hospitals—St. Thomas's and Guy's—which receive all cases that present without any challenge or recommendation. In Philadelphia and its suburbs there are about one million of people, and not one hospital open to every comer, except that of the Almshouse.

NIGHT MEDICAL SERVICE.—A night medical service will be established in Brooklyn next January. Those in Washington and New York are in active operation. *The Medical Record* states that the latter averages one or two calls every night.

M. DAVAINE, the discoverer of the bacillus of charbon, is dead.

NOTES AND QUERIES.

ACTION OF THE PHILADELPHIA COUNTY MEDICAL SOCIETY WITH REFERENCE TO THE ARMY MEDICAL MUSEUM AND LIBRARY.

AT the last stated meeting of the Philadelphia County Medical Society, Dr. William Welch offered the following preambles and resolution, which were unanimously adopted:

"*Whereas*, There is reason to fear that at the next session of Congress an effort will be made to destroy the identity of the great Medical Museum and Library at Washington, by merging them into the general Congressional Library, and placing them under the control of the latter; and,

"*Whereas*, Under their present management this Museum and Library have grown to be the most valuable collections of their kind in the world, and are consequently of incalculable value to the cause of medical science, thus rendering their preservation and progress objects of deep interest to the medical profession of this country: therefore,

"*Resolved*, That the Philadelphia County Medical Society earnestly but respectfully requests the honorable senators and representatives of Congress to make no change in the present management of the Army Medical Museum and Library, but would urge upon Congress the importance of providing a commodious fire-proof building in Washington, for better preservation and protection of these invaluable collections."

H. AUGUSTUS WILSON, M.D.,
Corresponding Secretary.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY FROM NOVEMBER 4 TO NOVEMBER 11, 1882.

SPENCER, W. C., SURGEON.—In addition to his duties at Fort Snelling, Minn., to perform the duties of attending surgeon at Department Headquarters. S. O. 176, Department of Dakota, October 24, 1882.

AINSWORTH, F. C., ASSISTANT-SURGEON.—Granted leave of absence for one month, with permission to apply for extension of one month. S. O. 120, Department of Texas, November 1, 1882.

AINSWORTH, F. C., ASSISTANT-SURGEON.—The leave of absence granted November 1, 1882, is extended one month. S. O. 121, Military Division of the Missouri, November 9, 1882.

BARNETT, RICHARDS, ASSISTANT-SURGEON.—Granted leave of absence for one month, with permission to apply for extension of five months. S. O. 202, Department of the East, November 1, 1882.

BREWSTER, WM. B., ASSISTANT-SURGEON.—On being relieved by Acting Assistant Surgeon Potter, will proceed to Fort Bridger, Wyoming, reporting to the commanding officer thereof for duty. S. O. 116, Department of the Platte, November 4, 1882.

GRAY, W. W., ASSISTANT-SURGEON.—Granted one month's leave of absence on surgeon's certificate of disability, with permission to apply for an extension of five months. S. O. 103, Department of the South, October 31, 1882.

MCELDENY, HENRY, ASSISTANT-SURGEON.—Upon arrival of Assistant-Surgeon Brewster at Fort Bridger, Wyoming, to be relieved and ordered to Fort Robinson, Nebraska, to report to the commanding officer thereof for duty. S. O. 116, Department of the Platte, November 4, 1882.

O'REILLY, ROBERT M., CAPTAIN AND ASSISTANT-SURGEON.—Detailed member of board of officers to assemble at Washington, D.C., to examine into and report upon qualifications of candidates for superintendents of national cemeteries. S. O. 254, A. G. O., October 31, 1882.

BRECHEMIN, LOUIS, FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Leave of absence for five months granted. S. O. 259, Paragraph 2, A. G. O., November 6, 1882.

APPEL, AARON H., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Leave of absence extended two months. S. O. 255, A. G. O., November 1, 1882.

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PHILADELPHIA, DECEMBER 2, 1882.

ORIGINAL LECTURES.

CLINICAL LECTURE

ON A CASE OF TYPHOID FEVER, COMPLICATING PHTHISIS.

Delivered at University Hospital

BY EDWARD T. BRUEN, M.D.,

Demonstrator of Clinical Medicine in the University of Pennsylvania, etc.

Reported by W. H. MORRISON, M.D.

GENTLEMEN,—Dr. Pepper has informed me that he cannot meet you to-day, and has requested me to occupy the hour. I shall ask your attention to a retrospective view of the diagnosis of this case. My interest has been excited because the symptoms have suggested a few of the considerations which might influence a differential diagnosis between catarrhal fever and acute miliary tuberculosis. The patient, a young man 25 years of age, was admitted May 5, 1882. For more than two weeks he presented many of the symptoms of typhoid fever,—*i.e.*, hebetude, diarrhœa, tenderness over the right iliac fossa, a non-characteristic papular eruption, and a temperature which eventually proved itself characteristic of that disease, although for the first week it was not at all typical. In addition to these general symptoms, physical examination enabled us to discover at the apex of the right lung the ordinary signs of incipient phthisis. Inquiry into the family history showed positive predisposition to phthisis, both parents and several other members of his family having died from that disease. With the symptoms above mentioned, with such a family history, and with distinct evidences of consolidation at one apex of the lung, the question arose as to whether this might not be a case of general catarrhal process with implication of bronchial and intestinal mucous membranes. Secondly, might not the lesions consist in a miliary tuberculosis in which the pulmonary and intestinal regions were involved?

In order to make this subject clearer, I shall ask your attention for a few moments to the consideration of the nature of catarrhal fever. This fever is quite common, especially in children, in whom it may accompany acute or chronic derangement of the digestive processes with diarrhœa, or the bronchial tract may be involved.

But what is the cause of catarrhal fever? There is one phrase which I think is misunderstood, or at least misapplied, by the student and practitioner. I refer to the term oxygenation of the tissues. Very often the impression exists that between the blood and the tissues there is a process of oxygenation going on which is equivalent to the process of oxygenation in the chemical laboratory,—that is, a union of carbon and oxygen with the production of heat. This is not really the case. It is rather an atomic rearrangement of the elements composing the tissues. The food is taken into the digestive canal, is there elaborated into certain products, passes to the liver, thence enters the circulation and is prepared for absorption. This absorption is a process of appropriation of the atomic constituents so elaborated,—a process by which the tissues, in this rearrangement or appropriation of the elements which they require, leave in the blood the elements not essential to nutrition, which are eliminated in the form of carbonic acid, urea, etc. You see, then, that the term rearrangement would be more suitable than oxygenation. This process of rearrangement is one of the chief causes of the production of heat. When the processes of nutrition are positively affected by some outside cause, then molecular changes run riot.

Sometimes this derangement is brought about by the absorption of some specific poison, as in typhoid fever, and sometimes by an impression on the system from exposure to cold.

Again, an irritant enters the digestive canal, and we have heat produced in one of two ways,—either from the absorption of partially elaborated food, which is incapable of assimilation, or, as some believe, by a reflex action upon the nervous system by which the special nerves which rule the process of nutrition are placed in such a state that their physiological action is impaired. Indeed, the entire process of fever is very probably always a neurosis. At all events, in disorders of the digestive canal the supply of material suitable for the nutriment of tissue is reduced, and tissue-waste is increased. If the temperature of the body is elevated, it is due to external causes.

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For instance, if the heat produced is rapidly passed away from the body, there will be little or no rise in the temperature; but if a large portion of the heat is retained, there will be a corresponding increase of the body-heat.

To return to our patient: had he, in consequence of an inherited scrofulous taint, a vulnerability to catarrhal inflammation? Had this catarrh involved not only the bronchial passages but extended to the parenchyma of the lungs, giving rise to the signs of incipient phthisis in the right apex as a principal element in his case? Were the symptoms of irritation of the intestinal tract, the diarrhœa, tenderness, due simply to a catarrhal process aiding to produce elevation of temperature by a method already indicated, or had we from the first a case of typhoid fever complicating a case of phthisis in its early stages?

We were unable for the first ten days to make a positive diagnosis. Possibly the case might have been more clear had we possessed an accurate history of the onset of the disease. We were unable to tell whether the patient had suffered with the prodromic symptoms of typhoid fever. On the whole, however, the evidence was in favor of the attack being recent.

The patient said that he had been ill only ten days before admission, but, as his intellect was somewhat dull, we could not place perfect reliance on his statements. The first point, then, in the differential diagnosis is the nature of the onset of the illness. If this had been a case of simple catarrhal fever, we should probably have had a history of cough for the past month or two, associated with some indisposition and possibly fever.

In the *Medical and Surgical Reporter* for May 13, 1882, you will find a case recorded by an English physician of note in which the symptoms were those of typhoid fever. The autopsy, however, revealed none of the essential lesions of typhoid fever, but showed consolidation of the lung and evidences of catarrhal inflammation of the intestine.

The next point, in the absence of any positive history, on which I was inclined to base my diagnosis was the temperature. Clinically, the temperature of typhoid fever is often markedly variable. Cases may run their entire course and the temperature not rise over 101°. Again, towards the beginning and end of the attack the temperature may be very variable. Thus, in the present case the temperature was—on May 11, A.M., 103°; noon, 104°; P.M., 104°. May 12, A.M., 101°; P.M., 101½°. May 13, A.M., 101°; P.M., 102°. May 15, A.M., 99°; P.M., 102°. The beginning and end of the attack may present these irregularities, but during the height of the fever usually the temperature is high or low. There is a difference of a degree or a degree and a half between morning and evening in favor of a higher temperature at the latter time. As soon as I noticed such a variation in this patient and the irregularity continuing for a week, the diagnosis was materially aided. Another useful point was the fact that although the symptoms in the lung continued, they did not rapidly increase in severity. On the contrary, the treatment addressed to the bronchial process was effective. If the trouble had been primary in the lung and the other symptoms secondary, our treatment would not have been so efficacious.

The following, then, were the points on which the diagnosis was based. 1. That the illness was probably developed after two or three weeks' incubation. 2. That the temperature, on the whole, was that of typhoid fever. Finally, that the lung-trouble yielded to simple treatment.

In regard to the exclusion of tuberculosis. The catarrhal trouble of which I have spoken might have been due to a secondary tuberculous process. When one speaks of an acute miliary tuberculosis, one means an eruption of miliary tubercles throughout the entire body, intestines, lungs, and other viscera. Time will not permit me to discuss the physical examination of the lung, as it would involve the consideration of a series of pulmonary physical signs, which are of a negative rather than a positive character. However, there are two or three general symptoms which are salient features in the diagnosis of miliary tuberculosis. One of the most valuable is the pulse. You may consider that the pulse-rate must be over 120 per minute, and remain so persistently, to make the diagnosis of tuberculosis at all probable. In this patient the pulse was not over 100. In the typhoid state of typhoid fever the pulse may be rapid, but in the early stages the pulse is not usually over 100 per minute: indeed, this is a diagnostic point between typhus and typhoid fevers. The rapid pulse in tubercu-

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losis is associated with venous repletion, and the surface is of a dusky hue. This is a very pronounced symptom. Again, in tuberculosis there are drenching sweats. These symptoms, with the evidences in the lung of some pulmonary process without the characteristic signs of consolidation, will suggest the diagnosis of acute miliary tuberculosis, which, by the way, is a rare disease.

Although we have failed to find in this case many symptoms characteristic of typhoid fever, and have failed to develop much that might be said upon catarrhal fever or acute miliary tuberculosis, yet our patient remains before us an example of typhoid fever passing through its natural course having complicated a case of previously-existing *incipient* phthisis. Observe his chest. He has what is commonly called the phthisical thorax,—*i.e.*, a long and narrow chest. There is also a moderate amount of pigeon-breast deformity. If it were not for this deformity you would more readily see that the antero-posterior diameter of the chest is reduced. From the peculiar appearance, these individuals are sometimes said to possess a coffin-shaped chest, painfully suggestive of their destiny. The pigeon-breast deformity can probably be traced to attacks of rickets during infancy or childhood. These persons are very prone to pulmonary disease, although with care this tendency is sometimes overcome. But catarrhal processes may predispose the intestinal canals to inroads of the poison of typhoid fever. The prior inflammatory action provides the most suitable environment for the germs of fever-poison, equally as catarrhal inflammation of the tonsils and pharynx prepares the environment for the attacks of diphtheritic germs.

The treatment of our case is based on a familiar plan. As soon as the tenderness and diarrhœa became marked, the following pill was used:

℞ Argenti nitratis,
Pulv. opii, āā gr. ii.
M. et ft. div. in pil. no. xii.
Sig.—One t. d.

He was given at first four and finally eight ounces of whisky per diem, according to the indications of the pulse. Quinine three grains three times a day, given only in tonic doses, and not with a view to control the temperature. When the temperature reached 104°, sponging of the body was employed, also cold was applied to the head, and cold cloths over the abdomen. These latter measures efficiently supplement sponging, and may be used exclusively in private practice when for any cause general sponging is inadmissible. Turpentine was also prescribed, according to the following formula:

℞ Ol. terebinthinæ, gtt. 140;
Glycerinæ, ℥ii;
Mucil. acaciæ, ℥ii;
Ol. gaultheriæ, gtt. xviii;
Aquæ, q. s. ad f℥iv. M.
Sig.—Two teaspoonfuls four times daily.

To each dose of the above eight drops of tincture of digitalis were added.

To relieve cough, he was given the following:

℞ Morphiæ acetatis, gr. ¼;
Tinct. hyoscyami, ℥jss;
Syr. tolutani, ℥ijss;
Aquæ, ℥ss. M.
Sig.—Two teaspoonfuls when indicated.

Turpentine stupes were applied externally, and the chest protected by a cotton jacket.

ADDRESS.

THE RELATION OF THE COUNTY MEDICAL SOCIETY TO THE PROFESSION AND THE COMMUNITY.

BY ALBERT H. SMITH, M.D.

Delivered before the Philadelphia County Medical Society, April 29, 1882.

IN accordance with the provisions of the By-Laws, I am required to make a public address at the conclusion of my term of service as President, and I am thus afforded an opportunity to say formally what I have already expressed informally, yet from a heart-felt sense of my obligation to the Society,—my debt of gratitude for the favors of the past. Unexpectedly honored, after but a short membership, with the highest office in your gift, I felt from the first that I could rely upon your kindness and leniency for help in a position so spontaneously offered me, and that shortcomings would be tolerated, and deficiencies condoned, in the administration of my office. I have, in the two terms of my service, fully realized that I have been the servant of a generous and indulgent master. For the uniform courtesy and consideration shown me, I cannot sufficiently express my grateful acknowledgment.

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But most of all is my obligation due to the great body of the Society, who have come forward to make the term of my Presidency one to which we can look back with more than satisfaction, as marked by unusual growth and vitality,—large growth in number, great vitality in work. At the time of my first election, in January, 1880, the membership of the Society was two hundred and seventy-five; during my term of two years there have been elected one hundred and ten new members, of whom ninety-seven were introduced and admitted to actual membership; we have lost by death eight members, by resignation one, and by forfeiture of membership five: so that we number at the termination of my service, in January, 1882, three hundred and fifty-eight, being an actual increase of eighty-three members. And it is no small source of satisfaction to look at the list of those elected during that term, and find among them many names of those who, when elected, occupied a high position in the profession, and who have taken their places already among our active workers, putting shoulder to shoulder with the older members to contribute to the common stock of material for mutual improvement.

But it is to the work that we have done that we can refer with special satisfaction; not merely the actual work, but, what is more important, the new foundations laid, upon which the Society in the future shall build up a massive superstructure, which shall make it a citadel of strength in giving increased influence and weight to the profession, in educating the community in Sanitary Medicine, and thereby striking a vigorous and ultimately effectual blow at the root of charlatanism in all its varied forms. Our Transactions show a mass of work which will compare favorably with that of any general Medical Association in the world,—the proceedings of our Conversational Meetings, held twice in every month,—the contributions of Philadelphia's best thinkers and workers in the profession. The articles there found present material for study and instruction in every branch of medicine, general and special, and the main striking feature of the papers presented to our meetings, as I hope will always be the case, is their thoroughly practical bearing upon the every-day work of the general practitioner. I say that I hope this will always be the case, because I feel that it is more in harmony with the purpose of the County Medical Society as a developer and educator of the profession than if our meetings were made the field of culture for the abstruse paper of the specialist, which, to the average general every-day practitioner, merely comprises an ostentatious display of what the specialist knows or what he can do, which his humble brother, engaged in the routine of hard work, has no time to study understandingly, and no prospect of being able to put into practice. Such work as this latter must be done by the special societies, which must ever have their important and necessary function in the profession, while the County Medical Society must be the common ground upon which all can meet and discuss the matters in which all are interested; where facts can be brought forward which are within the capacity of all to recognize, and laws of practice within the grasp of all to understand; where the specialist brings out from the accumulated stores which his opportunities have favored him in laying up, not dazzling recitals of bold performances which his brethren would not aspire to imitate; not bids for the handing over of cases which he alone has the ability to manage; not the advertisement of the "forthcoming book," which, like the trashy novel in the weekly journal, sends out its initial chapter gratuitously, that it may excite a morbid zeal in the purchase of its continuous numbers; not any of these, but the results of his experience put into such shape that the practical every-day worker in the field of general therapeutics may be taught how he himself may adopt them and adapt them in the general interests of humanity. Such has been the character of our work, and such, I may say again, I hope it always will be. It would be useless to attempt a synopsis of the papers read before us: they are to be found in the published volumes, in which we may have the right to indulge in a little pride, as the first-fruits of our labors, even though we may decide hereafter that it is more to the interest of the profession at large to give them a different and more general circulation than such volumes are calculated to do.

But during the last few months of my service I have had the satisfaction of seeing organized and put into practical operation a new scheme for the further utilization of the experiences of the trained thinkers and systematic workers for the benefit of the common fund of knowledge. I refer to the important step which has been taken in the establishment of the Committee on Clinical Pathology, and the appropriation of a meeting in every month for its use. Here we have a great foundation laid, upon which to build, from year to year, in the future history of our Society, a grand edifice, a training-school for the profession, where the every-day experiences of all may be brought out for the good of all; where no man feels so humble that he cannot bring forward his problem to be solved, none so exalted that he is not ready to make his knowledge useful in its solution. Under proper management, then, and with the eye of the committee kept singly to the general and common good, this clinical meeting promises to assume the position of the educator of the rank and file of the profession, to become really the true *Post-Graduate Course* of medical instruction. Here the hard-working man, who has no time to attend upon systematic courses of college teaching,

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and who can scarcely devote time enough to read the standard journals and new literature of the medical press, to keep himself fresh and bright as to the constant additions to medical knowledge which science and experience are daily making, can sit as a free scholar; he can listen to the expoundings of abstract doctrine and the deduction therefrom of practical rules, concreted and made impressive by their immediate association with, and verification by, the actual clinical observations of close and accurately-trained investigators. On the other hand, every such investigator may become a clinical teacher, and establish for himself a position as such dependent only upon his own merits, and not needing the aid of nepotism or favoritism for his advancement, nor fearing that jealousy or personal pique can degrade him; the professors and teachers of every honorable school may become instructors, but remembering that they can claim no divine right inherent in their station which can place their dicta above the searching scrutiny of scientific criticism. I do not want to be a vain enthusiast, nor to appear to be saying extravagant things to tickle and flatter the ears of my hearers; I do firmly and conscientiously believe that, if the new function of our Society is properly developed and sustained by the earnest hearty effort and honesty of purpose of those who have it in hand, supported by the zealous co-operation of the individual members, my prediction as to its future as a source of growth will be more than realized.

Another step in advance made during the past year, which will add to the value of our meetings, is the invitation to lecture before us of eminent and reliable teachers from other cities, thereby not only availing ourselves of the advantages of their experience as practitioners and their accomplishments as teachers, but cultivating cordial relations between our profession here and our brethren elsewhere. It is earnestly to be hoped that the course thus adopted will be maintained in every succeeding winter; and yet, at the same time, we must guard against a too frequent calling of such lecturers, however eminent, with the risk of putting them in a position so prominent as to depreciate the work of the more humbly placed yet equally good workers in our own midst. This feature of our work must be in perfect harmony with every other feature, and we must remember the only legitimate object of such invitations to lecture to be a mutual favor in the interchange of social and professional courtesies, promoting a kindly feeling between the practitioners of neighboring cities and our own. If we let the impression prevail that we extend such invitations simply as suppliants for instruction, because we have a deficiency of teachers in our midst, we unjustly depreciate our own resources, and encourage an assumption of generous benefaction on the part of those who come to us. It should be quite the reverse, and one condition of such invitation should be, that the paper read before us should be in the main a new contribution to medical science, or, at any rate, a bringing before us of some new theory or method of practice which has not before been generally published; otherwise we will soon have the lecturers presenting us with rehearsals of old lectures to their students, or of slight modifications—or perhaps no modifications at all—of papers already in the medical journals. It should be also an invariable condition that these papers should be contributions to our Transactions, over which we should have exclusive control, as in the case of contributions from our own members.

It would be superfluous to refer to the work done by the various committees, the standing as well as the special,—all working for the common good, and for the good of the community.

But, in addition to the scientific work we have done, I cannot pass over, without doing violence to my inmost feelings, a forward step that our Society has taken in the matter of our relation with our fellow-practitioners. It will be with no little glow of honest and virtuous pride that I shall recall during my lifetime the recollection that during my term of service the Society did honor to its sense of moral obligation by an act of long-delayed justice and right; that it wiped out the past edicts of proscription and intolerance with which our records were stained, and our fair fame as men devoted to a pure philosophy deeply tarnished; that it ceased to sustain and foster that ostracism which petty jealousy and narrow-minded bigotry had aimed at a class of faithful workers in the field of medical science; that by an almost unanimous vote (would that it had been fully so!) we have at last proclaimed to the world that the little band of women who have been now these many years working in the same field as ourselves, struggling against persecution and scorn and ridicule, yet loyal to truth for truth's own sake, never wavering or faltering in their devotion and adherence to the principles of regular medicine, yet with the foot of the regular profession upon their necks, contributing year after year to the common stock of scientific knowledge, and working effectually for the diminution of human suffering,—that these faithful and loyal women are no longer to be despoiled of their rights simply because they are women, powerless to compel the recognition of those rights, but that they are to be placed upon a footing of equality with applicants of the dominant sex, subject only to the same conditions and qualifications for membership; that at last we have had the manliness to admit the claim of women to admission to our ranks, a claim, as I hold it, not upon our favor or our courtesy, but of absolute and inalienable right.

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After thus reviewing the work done amongst ourselves in a term of two years, the question arises, What more can we do to fill our proper station in relation to the profession and to the community? Much, very much more. Our function in these relations has scarcely more than entered upon an embryonic stage. It is profitable for us now and then to stop and consider what are our legitimate functions in the professional and civil relations, and we cannot do better than refer to our charter for information. And what do we here find? That we are associated together to promote the "organization of the medical profession," "the elevation of the character and protection of the rights and interests of those engaged in the practice of medicine, and the study of the means calculated to render the medical profession most useful to the public and subservient to the interests of humanity." Here is, indeed, a broad field for work, and every one of us upon assuming the responsibilities of membership has solemnly pledged himself to use his best endeavors to promote this work. And I wish this evening to ask every member to institute a self-inquiry as to how he is redeeming that pledge, and how he may in future more honestly and faithfully redeem it.

Let us look first at the relation with the profession. We find it prescribed as our function to "organize" it, to elevate its character, and protect the rights and interests of those constituting it. Two questions are presented in the consideration of this matter: first, who constitute the medical profession? and, secondly, how shall we thus perform our duty to them?

As to the first, is the medical profession constituted of a select few, or does it embrace the whole company of the loyal disciples of Hippocrates who are faithful to the teachings of science? Manifestly the latter; clearly does our charter give us a fostering care over every practitioner of medicine, a graduate of a respectable school, of good moral and professional reputation, and who has not disqualified himself, under the exact terms of our By-Laws, from association with loyal regular physicians. The medical profession can only be limited by those qualifications; and every man and woman practising medicine regularly is, so far as a willingness exists to be thus included in the band of the faithful, a just and lawful claimant for the fostering care, the elevating influences, and the protection of his or her interests by the body of men who now constitute the Philadelphia County Medical Society. The County Society is the great authoritative representative body of the whole profession in the county; it is not a medical club; it is not an organization of selected medical friends; not an association founded upon the personal intimacies and congenialities of its members; but a great, broad, democratic organization for the mutual benefit of all the profession, and to which every respectable and qualified practitioner can demand admittance, as every man born in the State can claim recognition of the rights of citizenship. Until we freely admit this claim, we are not living up to and promoting the end for which we banded together.

How, secondly, shall we best fulfil the sacred trust which we have in solemnity and good faith assumed? By drawing them to us, by educating them, by letting them feel that the shield of the Society is put between them and any unjust attacks, and its fostering arms ready to be thrown around them in misfortune or trouble. Are we drawing them to us? We are increasing our membership, it is true; but how far do we yet fall short of carrying out the requirement of our charter for "organizing the profession"! In the Physicians' Directory we find the names of over one thousand regular practitioners, and our membership in January was three hundred and fifty-eight,—scarcely more than one-third. I know full well that we would never be able to embrace the whole regular profession in our membership, because some will decline such association; but are we drawing to us all that we might and ought? I believe not. Do we make it easy for the timid and shrinking, the young and modest, the poor and struggling members of the profession to come to us, to have their character elevated and their rights protected? On the contrary, we have placed in our By-Laws a provision which gives to a factious, but well-organized, minority of one-third at a stated meeting, held, as it always is, at an unreasonable hour for the attendance of the members who are busy working men, the privilege of rejecting any name against which a determined leader chooses to direct his animosity, even though that name has been reported by the censors as without professional spot or moral blemish, and when the friends of the applicant would have such thorough confidence in his success that they would think it unnecessary to make any organized effort to elect him. Thus a man without professional reproach or moral obliquity is deprived of his clear and undeniable right under our charter by the easy effort of any one who has a personal pique to gratify against him. I know men now in our city of high standing as practitioners in their neighborhoods, and of unimpeachable integrity, who are unwilling to have their names brought forward for membership because of this clause in our By-Laws giving the power of defeating them to a handful of men under the lead of some whom they know to have an antipathy to them, however groundless and unwarranted. My brethren, these things ought not to be. Such a provision, giving a rejecting power to a few, is utterly antagonistic to the spirit of our charter, and inconsistent with the true dignity of a scientific body formed for the purposes involved in our or-

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ganization. Let us see if we cannot mend it,—make the difficulties of obtaining membership as little as possible behind the report of our censors, whom we can implicitly trust, if every man is honest and manly in sustaining before them all just charges against candidates for membership, instead of waiting to stab them in secret through the ballot-box.

My plan is to bring in every practitioner of respectable professional and moral character, man or woman. If he is ignorant, educate him through his attendance at our meetings, interest him in the new facts brought before him, stimulate him to study by developing before him the manifold treasures of medical science, make him feel kindly and with brotherly tenderness the advantages to accrue to him through an increased knowledge; if he is defective in the instinct which makes him a congenial companion, let him be brought into constant contact with those who have had superior advantages, and, if the intercourse be characterized by the true spirit of gentlemanly courtesy, that contact cannot fail to refine and cultivate him. Thus only will we be carrying out the spirit and letter of our charter, in elevating the character of the profession. If he has been guilty of no wilful violation of the law of the land or of the moral code, such as to unfit him for intercourse with honest men, or if he is free from such professional or moral practices as would make his membership a reproach to our association, draw him to us, educate him, refine him, and he may be a brand plucked from the burning, an honor to society, when otherwise he might have been a reproach. Shall we not give to this our serious thought, and make, each one of us, the self-inquiry, "Am I doing all in my power to elevate the character of our profession?" Working in this direction, we shall steadily harmonize the various discordant elements amongst us, jealousies and contentions will become rare, progress in development will be steady, and the County Medical Society become, not the battle-ground of cliques and parties, but the area for laudable contests in the search for truth, a great temple of science, where the worshippers, without distinction of sex, or race, or nationality, or religion, shall simply vie with each other in their devotion to science, their pride in the profession of their adoption, and their earnest efforts to promote harmony in its ranks and success in its work for suffering humanity. Thus also will be increased our effective force in protecting the rights of injured brethren, and our moral weight in the community steadily promoted.

And this brings me to the subject of our relations with the community. Our charter makes it obligatory upon us to "study the means calculated to render the medical profession most useful to the public and subservient to the interests of humanity." Now, there are many ways in which this provision can be carried out. One of the most important functions of the County Medical Society is to trample out charlatanism in its various forms, from the vending of the universal panacea and the selling of charms, up to the regularly organized and partially systematized deceptions of homœopathy and eclecticism. Will we do this by proscription and the outpouring of vindictive hate? In no way can we more surely strengthen it. The blood of misguided fanatics has been no less the seed of heresy, than has that of the martyrs the seed of the church. There has been no error advanced in the history of the world which has not been strengthened for the time by a wholesale and indiscreet persecution, with its attendants of tirade and ridicule. Nor will we accomplish it by health-laws or provisions for registration: these may indeed be instrumental in diminishing or even in entirely removing from our midst the grosser forms of quackery, which are but little dangerous, because in their rudeness and buffoonery they fail to reach more than a small circle of the profoundly ignorant and superstitious; but, on the other hand, they actually legalize and establish on a firmer basis the more refined and therefore more dangerous forms of medical fraud which come upon the community supported by the diploma of any institution chartered by the legislature under the false designation of a medical school. And still further will our efforts be unsuccessful if we attempt to destroy and enfeeble error by the novel method proposed by the profession of a neighboring State,—in affiliating with falsehood, meeting it, shaking hands with it, under the plea of generosity and the need of moderating an unjustifiable intolerance. We *cannot* be too intolerant of actual error in our own hearts; we need not be aggressive, or attack it violently, but neither must we be led into making compromises with it and giving it entrance and foothold in the temple of truth. Not only will the plan proposed in New York not diminish quackery, but it will promote and develop the vilest and most detestable form of it, in the persons of a class of charlatans whose only purpose is to rob the community, under pretence of practising either system of medicine, or selecting the best features of each. We may respect the genuine homœopath, and give him credit for sincerity and honesty, while we pity his delusion; but the fraud which would attempt to palm itself off for liberality, by adopting the name of homœopathy, and in reality resorting to the use of regular practice, merely to fill the pocket by pandering to a popular weakness, and then strengthening its position by a sophistical claim to generosity and wide liberality, must meet with the utter contempt and abhorrence of all respecters of truth and honesty. And it is with this class that the specialists of New York propose to affiliate for their own pecuniary profit. Truly do they meet a just

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reward, when the professors of old homœopathy reject their advances with scorn: these do not want to affiliate with them, they do not desire consultation with regular physicians, knowing full well that a consultation of two men who do not recognize the same fundamental principles in science cannot be anything but an empty form, a mere farce. Hahnemann and Hering and Helmuth would no sooner have sought such consultation than would Physick or Rush or Meigs. It is only the money-making doctor, the worst of all charlatans, in whatever rank he be found, who advocates this affiliation as a proper thing. We will never stamp out quackery by this method.

To serve the community in this matter, we have two plans to follow, with assurance of good results. First, to encourage a higher grade of education in the profession. For the deficiently educated practitioner, already hard at work, we have the meetings of our County Medical Society, with its vast amount of material and discussion, and the intelligent practitioner, who also reads as fully as he can, will pick up in this way almost a full college course of medical learning. But we must throw all our influence towards the adoption of a higher and steadily increasing grade of scholarship in the medical schools. Let us individually and collectively use our influence for the highest educational course, and let us throw our favor towards the election of honest, conscientious teachers in the colleges, who will teach under a full sense of the awful responsibility of giving instruction to the young student of medicine, upon the soundness of which will depend the lives of many, many human beings. There is no more powerful means of rooting out ignorance and delusion from the minds of the people than to send out from the graduation-form the best educated men in their profession: bring truth in conflict with error, and the latter must ultimately give way.

But another essential to our successful attack upon charlatanism is the speedy getting rid of it in its many forms in our own midst. The sensationalist, the alarmist, the man who magnifies the importance of the disease in his patient to increase his reputation from its recovery, or to fill his purse from the highly-wrought anxieties of a tender parent,—the man who calls every redness of the fauces a "diphtheritic sore throat," using an expression which, in any case, conveys a false impression, the throat being either affected with genuine diphtheria or not at all,—the charlatan, in whichever of these forms he appears, becomes the worst of all charlatans, and, in his desire to accumulate money at the expense of an anxious mother's feelings, deserves our thorough reprobation. We find the same spirit exhibited in the man who runs wild over "sewer gas," and another over "blood-poisoning," another over "malaria," using names associated in the public mind with the most alarming, malignant, and fatal conditions, to apply to simple cases of disease, altogether remote from any such conditions. Another form of charlatanism in our midst is the filling of the medical journals with papers containing highly-colored accounts of professional work, exaggerated statements of individual experience, authoritative expressions of opinion, presumably founded upon an amount of experience never possessed; the encouraging of newspaper reports of clinical work, always exaggerated and over-laudatory; the publishing of lectures for popular distribution, upon subjects which should reach only the guarded professional eye, and of doubtful necessity or utility even for that: all these are merely different forms of charlatanism, and all the worse because they are practised by those who have subscribed to the Code of Ethics, and been trained under the very eaves of the sanctuary, and received the confidence and trust of their professional brethren; far worse than in those who are bound by no code and recognize no obligation to any band of brethren. The root of all charlatanism is the love of money, and the man who is devoured with this sordid passion soon runs into unrestrained license, and, little by little, forgets that he is the minister of science and the priest of humanity. While all must live, and while we are bound to employ our talents and our education to the proper laying up of the means of subsistence, when we let this become the dominant purpose of our lives and the controlling influence in our relations with our patients and the community, then do we become ourselves unworthy members of a pure and high-toned profession, sham votaries of a noble, yea, the noblest, science, and prostitutors of those talents from their legitimate use. Let us, then, do all we can to frown down every form of charlatanism in our ranks, every irregular practice, every bid for fictitious popularity, every trick for the procurement of unearned pay. Before we sit in judgment upon the acts and principles of others, or attempt a course of proscription or denouncement, let us see that our own skirts are clean; let us pause and make a self-investigation before we cast the stone.

Then, when we present before the world an unbroken front of earnest, honest, unselfish workers in the cause of a suffering humanity, when with clean hands and pure hearts and with arm linked in arm moving forward in our common purpose of serving the common good, with no member of the profession left out, except by his own act and will, with no banner of proscription except that of an unchangeable warfare against manifest error, and an unwavering stand against moral evil, then can we come before the community as instructors, as watchmen upon the tower of its defences, as authoritative and accepted

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advisers in everything that relates to the health and safety of the people; then, when we raise our voices in behalf of a clean, well-paved, well-lighted city, and appeal for the protection against pestilence on behalf of the parents and children in our midst, then, and then only, will we be listened to with respect and followed in ready obedience to our teachings.

In our efforts to bring about a social and fraternal feeling amongst us, we must not forget a noble institution which we have just founded, in which we can do a service of brotherly love, not only to the present but to the future members of our body; in which we, while prosperous and in the reception of good returns from our work, may be laying by a ready help in time of need, perhaps, for ourselves, at some future period of possible adversity, at any rate certainly for others who may come after us, as unfortunates and destitute. I refer to the Mutual Aid Association, and I wish to appeal to the members of the Society to come forward and give to this noble work a more generous assistance than it has yet had.

With earnest hopes for the future of our Society, and a firm assurance of increasing vigor and usefulness and a career of honor and a high place among societies of the world, I will again thank you, Mr. President and gentlemen of the Society, for the many undeserved kindnesses of the past.

NOTE.—This address should have appeared in Vol. IV. of the Proceedings of the Society, but owing to the loss of the manuscript it has been delayed until now.

ORIGINAL COMMUNICATIONS.

FOREIGN BODY IN THE BLADDER, WITH ENLARGED LOBE OF THE PROSTATE—MEDIAN LITHOTOMY, AND AVULSION OF THE PROSTATIC GROWTH—RECOVERY.

BY PROF. ASHHURST.

Reported by H. R. WHARTON, M.D.

MR. W., aged 61 years, was admitted to a private room in the University Hospital, September 28, with the following history. For more than ten years he has suffered from pain and difficulty in passing his urine, and for the last five years has been compelled to use a catheter. Seven weeks before his admission to the hospital, while introducing a soft French (Nélaton's) catheter, it became engaged in the neck of the bladder, and, when withdrawn, the portion in advance of the eye was left in the organ.

After this time his symptoms became much increased in severity, and he was compelled to empty his bladder at intervals of ten or fifteen minutes through the day and night.

The patient being etherized, a sound introduced into the bladder came in contact with a small movable body covered with calcareous matter, and the bladder was found to be much contracted and ribbed, and the prostate gland to be much enlarged, particularly in its median portion.

On October 2, Prof. Ashhurst removed the foreign body by the median operation. The patient was etherized, and an ordinary staff, grooved on the back, was introduced into the bladder, which was then opened from the median line of the perineum, and about one inch of the end of a soft gum catheter covered with phosphatic deposit was removed with a small scoop. On exploring the wound, there was found a projecting irregular growth, about the size of the first joint of the thumb, springing from the prostate, and almost completely occluding the internal orifice of the urethra. This was twisted off with forceps.

The patient reacted well, but several hours after the operation had a free consecutive hemorrhage, which necessitated the packing of the wound around a catheter.

He did well after this, the packing coming away, without bleeding, on the fourth day. From this time the patient rapidly convalesced, and left the hospital on October 25, with his wound healed, entirely free from pain, able to hold his water two or three hours at a time, and urinating in a full stream without the aid of the catheter.

REMARKS BY DR. ASHHURST.

The removal of a foreign body from the bladder by the median operation presents in itself no novelty calling for comment; but the interesting feature of this case is the successful attempt which was made to relieve the patient from the effects of chronic prostatic obstruction by the removal of the occluding growth,—the so-called "enlarged third lobe" of the prostate. The propriety of supplementing the operation of lithotomy, in old men with prostatic hypertrophy, by enucleating any semi-detached glandular masses which might be found in the wound, was strongly advocated by the late Sir William Fergusson, and a similar course has been adopted by Messrs. Cadge and Williams, of Norwich, Keith, of Aberdeen, Harrison, of Liverpool, and, no doubt, other surgeons. The result in the case now recorded was eminently satisfactory. Except for the consecutive bleeding, which, some hours after the operation, required the plugging of the wound, the patient had really not a single unfavorable symptom. The relief from pain which followed the removal of the foreign body was immediate, and when,

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as the wound began to heal, the urine flowed in a gradually increasing stream per urethram, his gratification at the prospect of being able to dispense with the catheter, which for five years had been his sole means of emptying the bladder, was very plainly manifested. The operation not only relieved him from the immediate source of danger,—the broken catheter-end in his bladder, and the consequent cystitis,—but effected a radical cure of his long-standing chronic ailment,—urinary retention from enlargement of the prostate.

It seems to me that a case like this opens a wide field for discussion as to the possible propriety of employing operative measures in advanced examples of prostatic disease, even without the complication of a foreign body or calculus in the bladder. For cases of ordinary hypertrophy, or where the use of the catheter is painless and efficient, no doubt an operation would be undesirable; but there are some instances of median enlargement in which the suffering is really very great, and in which the ordinary treatment amounts, in fact, to little more than the classical "meditation upon death," in which I cannot but think that the surgeon would be justified in at least submitting the question of operation to the patient.

A CASE OF ACUTE MUSCULAR RHEUMATISM TREATED BY COLCHICIN HYPODERMICALLY.

Reported by A. B. Hirsh, M.D., Resident Physician.

THE following case, treated in the German Hospital during the recent service of Dr. Frank Woodbury, is interesting as showing the new use of an old remedy, and for a disease which is often intractable. The relief experienced was quite as positive as that which had been afforded previously by morphia injections, and far more permanent.

J. H., German, aged 28, brewer, was admitted into the German Hospital on the 28th of August, 1882, as a case of muscular rheumatism. The history showed this to have been a first attack, due to exposure to wet and cold, and contracted two months before. During this time he had not had any regular medical attendance, but had vainly used many popular nostrums for relief. Upon admission, the patient was robust and well nourished: he had no fever, but there was great tenderness and pain in the muscles involved, which were chiefly those of the calves of the legs and the flanks on both sides. Following the hospital custom in these cases, he was at once placed on salicylate of sodium for a few days; but, no relief being experienced, he was ordered twenty-drop doses of tinct. ferri chlor. in one drachm of syr. limon., four times daily, given well diluted with water. He was kept in bed, and locally a combination of chloroform, turpentine, and soap liniment was directed to be used night and morning. A week later it was found necessary for the acute exacerbations of pain that a quarter of a grain of morphia sulph. be injected beneath the skin occasionally. It should be stated that while confined to his bed his diet was carefully regulated, meat and stimulants being interdicted. This plan was continued until September 18, with the result of affording temporary relief, but without permanent success. Indeed, the patient was often in greater pain than at any time previously. The attending physician now resolved to use colchicum, and, in order to avoid its action upon the alimentary canal and to test its powers locally, it was decided to give it hypodermically. For this purpose the imported alkaloid was employed. Five minims of a one-tenth per cent. solution of Merck's colchicin was now ordered to be injected into the painful muscles as required, never more frequently than three times, but at least once, daily. To this was subsequently added a warm bath every night just before retiring, the liniment before mentioned being used once a day. Marked improvement was soon apparent, so that the patient himself remarked his comparative comfort and freedom from pain following the injections, a mere soreness remaining in the parts. Signs of incipient inflammation about the seat of one or two of the punctures were quick to disappear upon application of a solution of lead-water and laudanum.

The improvement was manifest from the start, and the patient rested well during this night for the first time since his attack began, and it continued in spite of a spell of continuous damp and chilly weather lasting several days; for, although it brought a slight return of the old symptoms, they were by no means so severe, and were easily controlled by the daily injections, in which there was no intermission. September 25 was again cloudy, and he complained of some soreness in the lumbar muscles. The pain had increased in the right side, because of which a deep injection was made on this day into the latter region, giving speedy relief. Now, although next day's weather was just as unfavorable, the muscular pains were entirely absent. Some remaining tenderness in the region of the sacrum was controlled by a belladonna plaster. Symptoms continuing favorable, he was discharged, cured, on October 6, having been free from pain for more than a week. He was instructed to return to

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the dispensary if he had more pains, but up to this date (November 8, 1882) he has not again sought relief.

GERMAN HOSPITAL, PHILADELPHIA.

A MATERNAL IMPRESSION.

BY WILLIAM T. TAYLOR, M.D.

THE following case will illustrate the effect of a mental impression on the fœtus in the early period of its existence.

Mrs. G., a delicate, nervous Irishwoman, gave birth to a male child on October 16, 1882, which was perfectly well formed, except that the glans penis was devoid of a prepuce, as if it had been circumcised. It had the appearance of an infant Jew which had been subjected to the Mosaic rite.

The mother accounted for this deformity by telling me that in the early part of her pregnancy she had seen a little girl of five years sitting on a door-step opposite to her dwelling, pulling violently at the penis of a little boy of three years. Fearing that the member would be torn off, or that he would be seriously injured, she turned away from the sight, feeling quite sick at the time, but little expecting then that she would *mark* her unborn babe; but "now she is satisfied that that was the cause." Until a better explanation is given of this abnormal condition, I must accept her opinion.

NOTES OF HOSPITAL PRACTICE.

UNIVERSITY HOSPITAL.

CLINIC OF JOHN ASHHURST, JR., M.D., PROFESSOR OF CLINICAL SURGERY IN THE UNIVERSITY OF PENNSYLVANIA.

Reported by LOUIS J. LAUTENBACH, M D.

CASE I.—ASCITES THE RESULT OF AMYLOID HEPATIC DISEASE.

THIS child is suffering from a very large collection of fluid in the abdominal cavity,—ascites. The cause is to be found, probably, in some general degenerative condition of the viscera. Probably the liver or kidneys, or most likely both, are affected with what is known as albuminoid or amyloid degeneration. This condition often accompanies long-standing bone-disease; and this child has been subject for some time to chronic disease of the spinal column, which has been treated with the plaster-of-Paris bandage.

The present urgency of the case is due to the fact of the extreme abdominal distention interfering with breathing. Notice the excessive enlargement of the abdominal veins. By means of succussion, a hand being placed edgewise on the median line of the abdomen to break the surface wave, we feel a distinct impulse of fluid passing from one side to the other: this proves conclusively, were there any doubt, the presence of fluid as distinguished from enlargement from fat or other causes. I have been summoned many miles from home to tap a patient supposed to be suffering from ascites, and have found the case to be simply one of redundant fat.

The operation of tapping is exceedingly simple. You should have a sheet or a piece of muslin with its ends cut into tails, so that these can be interlaced behind and drawn tight as the fluid escapes, thus giving support to the abdomen and preventing the occurrence of syncope. If the operation be performed in the recumbent posture, the bandage is not absolutely necessary, but it is indispensable if the patient be tapped while sitting, as may be required when there is much dyspnœa. A hole is cut in the bandage at the point where the trocar is to be introduced, and after the operation the tails can be brought forward and secured with pins to the central portion. The operation can be performed either with the ordinary trocar and canula, or with the aspirator. I prefer the former, as it allows the fluid to be more quickly evacuated, and as aspiration presents no particular advantage in this situation. A convenient mode of performing the operation is to make a puncture, with a sharp bistoury, in the median line, a short distance below the umbilicus, carrying this first puncture almost, if not quite, to the peritoneum, and then inserting the trocar through this opening.

Of course tapping is usually only a palliative operation. In some cases of chronic peritonitis, where the fluid is encysted, tapping may occasionally be a curative measure; but when, as in ordinary ascites, the fluid is the result of passive effusion, the operation must commonly be repeated after a longer or shorter time.

We occasionally meet with a fluid which spontaneously coagulates, just as we see in some cases of hydrocele. The fluid here is limpid and of a light-green color and frothy, this showing its albuminoid nature.

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The quantity of fluid drawn off is certainly over a gallon.

The operation of tapping is probably always followed by a certain amount of local peritoneal inflammation; but occasionally general peritonitis is developed, and its occurrence is a risk for which you must always be prepared.

We close the wound with adhesive plaster, then put on a pad of lint as a compress, and draw the bandage tight, securing the tails with numerous pins.

CASE II.—SYME'S AMPUTATION FOR DISEASE OF THE ANKLE-JOINT.

Our next patient, a young woman, has been in the hospital for a long time, having been admitted last summer. Her case is one of chronic joint-disease dependent upon hereditary syphilis. When she first came under our observation, she had disease of the wrist, ankle, and hip; but the latter articulation was not very seriously affected, and is now apparently well.

The wrist, too, has healed under treatment, and we can see the characteristic scars left as evidences of the old disease: the wrist is still somewhat stiff. The ankle for a long time seemed to be improving, but has latterly become worse again. When admitted, the patient was weak, thin, and anæmic, but by means of good food and careful treatment has improved very much. Were it not for the disease of her ankle, she could now lead an ordinarily active life. There are several sinuses leading to carious bone, and the joint is extremely painful and much deformed. Under these circumstances, I have advised amputation. I have not advised excision, because of her syphilitic history, her general condition, and the nature of the lesion. Excision would require long confinement to bed, and would very probably be followed by a recurrence of the disease. An amputation requires much less after-treatment, and it is important that as soon as possible she should be able to get exercise in the fresh air. Besides, the ankle-joint is not a very favorable locality for excision, except in cases of injury in healthy persons.

In disease of the ankle-joint, a form of amputation can be adopted which will get rid of the diseased tissues and yet allow the preservation of a very useful member. The operation to which I refer is that introduced by Mr. Syme. The first step is to make an incision beginning just below the middle of the external malleolus, carrying it transversely across the sole of the foot and terminating it on the inner side, at a point corresponding to that at which it was begun. The ends of this cut are then connected by a curved incision over the front of the foot. Syme's incision has been modified by other surgeons, some making the heel-flap longer, others shorter. In some cases the flap has been known to slough; but if, in dissecting it back, the knife be kept close to the bone, there is not usually much risk of impairing its vitality. Syme directs that the heel-flap should be pressed and dissected backwards until the tuberosity is fairly turned, before disarticulation is effected.

Sometimes, in a young person, you can preserve the periosteum in the heel-flap: this both facilitates the operation and adds firmness to the flap itself.

The tendo Achillis may be divided either before or after disarticulating. When the foot is removed, the malleoli must be cleared with the knife, and then sawn off together with the articulating surfaces of the tibia and fibula. The divided vessels are then tied. Before stitching the edges of the flaps together, an opening is made through the posterior part of the heel-flap, and a drainage-tube inserted.

In this operation we get the strong tissues of the heel as a support for the stump, and, as the amount of shortening is not considerable, we obtain a very serviceable limb. As far as the mere usefulness of the part is concerned, the result is almost equal to that of an excision, while the risk of the operation is less.

[The operation was performed while the patient was under the influence of ether. The Esmarch bandage, as well as the tourniquet, was used. Very little blood was lost. The wound was closed with silver sutures, and these were reinforced with adhesive strips; the stump was dressed with lint wet with undiluted laudanum, and then covered with oiled silk and a bandage.]

THE Trustees of Jefferson Medical College, at a meeting held November 22, elected Dr. J. Solis Cohen Honorary Professor of Laryngology. They also filled the positions on the surgical staff rendered vacant by the making of Drs. John H. Brinton and S. W. Gross Professors of Surgery, by electing Dr. Joseph Hearn and Oscar H. Allis visiting surgeons to the Hospital.

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TRANSLATIONS.

PERFORATION OF THE MASTOID PROCESS FOR CHRONIC EAR-DISEASE—ACCIDENTAL OPENING OF THE TRANSVERSE SINUS—RECOVERY.—Dr. Knapp reports the following interesting case in the *Zeitschrift für Ohrenheilkunde* (No. 11). A girl, 16 years old, had suffered for three months from constant pain in the vicinity of the left mastoid process, which radiated over the left side of the head and occasionally also on the face and neck. Sleeplessness and incapacity for the slightest mental effort resulted. The skin over the mastoid process was found to be slightly reddened and swollen, and very tender to the touch. The hearing-distance was normal; the membrana tympani slightly cloudy. Upon the view that a chronic inflammatory process might be present, with retained mucopurulent or bloody effusion, Dr. Knapp undertook to open the mastoid process. He found the bone compact, its substance white and shining, to the depth of four millimetres, but in its deeper portions very hyperæmic. Upon attaining a depth of six millimetres, the sound struck upon soft tissue, from which light pressure caused a rather free flow of dark blood, but which stopped upon discontinuing the pressure. No pus was found. With regard to the quantity of the blood, the operator concluded that it must have come from the transverse sinus, in which a slight wound must have been made either by the chisel or by the sound. The wound was united by sutures, the cavity being filled with a tent of absorbent cotton. In twelve days the wound had entirely healed; the pains had entirely disappeared, and did not return.

The case was regarded as a chronic mastoiditis leading to sclerosis. The principal symptom was localized pain existing constantly in the mastoid process, but also radiating over the corresponding half of the head. Most of these cases get well by simple rest in bed, and hygienic care, without operation, which, however, may be required if the symptoms are otherwise unrelieved.

A NEW METHOD OF AMPUTATION OF THE UPPER EXTREMITY.—In a case of osteosarcoma of the scapula, M. Desprès performed amputation at the shoulder after the following original method:

First Step.—Ligature of the subclavian artery outside the scaleni muscles by the usual method, using a double ligature in order to guard against secondary hemorrhage.

Second Step.—Incision *en raquette* carried from the middle of the space which separates the projection of the spinous apophyses of the vertebræ from the internal scapular border, at the level of the spine of the scapula, following the back of it, cutting around the point of the shoulder, and passing under the axilla to the middle of the armpit, then returning to the back to rejoin the incision near its point of departure.

Third Step.—Dissection of the upper flap without communicating with the original wound of the ligature of the subclavian.

Fourth Step.—Section of the clavicle as near its middle as possible.

Fifth Step.—Ligature of the axillary vein.

Sixth Step.—Detachment of the scapula by cutting the small pectoral and the great dorsal muscles, and subsequently the other muscles inserted upon the scapula, which are cut while dislocating this bone backward.

The wound is then united by suture, except at the angle corresponding with the axilla.

This operation was suitable for a case of cancer of the scapula, like the one reported, in which it was successfully performed. It was considered less dangerous than excision of the scapula only and leaving the arm. It would also be proper in a case of advanced white swelling of the shoulder involving the scapula.—*La France Médicale*, No. 36.

CHYLOUS URINE WITHOUT FILARIA.—A man, 67 years of age, who had an attack of right hemiplegia following thrombosis some years before, was admitted into the Hospital Necker for treatment for chyluria. He had not had syphilis, was not an alcoholic subject, nor had he any lesion of the principal viscera other than that stated: his arteries, however, were slightly atheromatous. He had always lived in France, and had enjoyed good health prior to the attack of hemiplegia. He had remarked for a year that, without experiencing any derangement of his health, he had passed milky urine. Strange to say, this occurred

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only in the morning: it was not present during the day, although the urine continued albuminous. The chylous urine did not deposit fibrous flakes, and was without odor: it had not the appearance of purulent urine, and did not precipitate with ammonia. The addition of ether rendered it clear, and it left a greasy stain on paper. Under the microscope it was found to be composed largely of fine fatty particles, with a few white and, very rarely, red blood-cells. No parasites were seen, and none were found in the blood. The amount of fat was between three and four grammes of fatty material to the litre.

The reporter, Dr. Boissard, concludes that there must be two kinds of hæmatochyluria: 1, the hæmato-chyluria of hot climates, a parasitic disease, and, 2, a rare disorder, in which there are urines which may simply be called chylous without our being able to determine further the nutritive troubles which favor their production. —*La France Médicale*, No. 35.

Diseases of the Liver accompanied by Retinal Lesions.—Litten calls attention to hemorrhagic extravasations and points of fatty degeneration (containing tufts of tyrosin and apparently spheres of leucin) in the retina in a case of yellow atrophy of the liver following phosphorus-poisoning. He also has detected simultaneous pigmentary retinal degeneration in cases of hepatic cirrhosis (*Wiener Med. Wochen.*, No. 39). Raymond, in a lecture on hypertrophic cirrhosis (*Le Progrès Médical*, No. 40), claims that hemeralopia is a pretty frequent complication of chronic icterus. Netter (*Proceedings Soc. de Biologie*) points out a pathogeny of hemeralopia, based upon the observed peripapillary œdema, the dilatation of veins, and the paleness of arteries, which he considered merely as symptoms of slight compression exerted behind the optic papilla probably by deposits of pigment.

The Galvanic Current as a Cardiac Stimulant. — Professor Von Ziemssen (*Deutsch. Archiv f. Klin. Med.*, No. 30) claims that the ordinary faradic electric applications completely fail to alter the action of the heart or to disturb in any way its sensibility, while, on the contrary, the direct or battery current produces a powerful stimulating effect. The importance of this observation in the treatment of narcotic coma and syncope is very great. The result is the more remarkable as the experiments to support it were made upon the human subject, a woman having lost a portion of the anterior wall of the chest by an operation for the removal of an ecchondroma, so that the heart was partially exposed.

Importance of Ear-Affections in Diphtheria.—Dr. Bürkner, in the *Berliner Klinische Wochenschrift* (No. 43), reports two cases in which middle-ear inflammation followed upon diphtheritic disease of the throat, and in which the danger of destruction of the internal ear, and perhaps lifelong disease of the organ, if not early death, were entirely prevented by early examination and prompt paracentesis of the membrana tympani, followed by application of cleansing solutions of boracic acid. Great relief was at once afforded to the ear-ache and vertigo, from which the patients had previously complained, and a cure resulted in five and seven weeks in the two cases respectively.

Micrococci in Erysipelas.—In a case that died at the Wurzburg Surgical Clinic from simple uncomplicated erysipelas, Dr. Fehleisen (*Deutsch. Zeit. für Chirurgie*, Bd. xvi., Hft. 5 und 6) found, about one centimetre from the border of the redness, that the lymph-vessels and perivascular lymph-spaces were filled with micrococci; nearer to the border there was found with the cocci a transudation with a fine-celled infiltration. The writer is of the opinion that this micrococcus is specific and pathogenic of erysipelas, and that it differs morphologically and physiologically from all other bacteria that have been observed thus far.—*Centralblatt für Chirurgie*, No. 40.

Primary Origin and Formation of Uric Acid.—After ligaturing the ureters of chickens, J. Colosanti found accumulations of urates in the inter-fibrillary connective tissue of the muscles; and also in the bile the salts of uric acid were recognized by the microscope. The conclusions are that the kidneys even in birds were organs of excretion for products of tissue-waste, including uric acid, and that the urates first arose in the tissues, and were not carried there by resorption from the kidneys.—*Centralblatt für Med. Wissen.*, No. 38.

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PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, DECEMBER 2, 1882.

EDITORIAL.

HOW THEY MAKE "COD-OIL" AT SWAMPSCOTT.

SWAMPSCOTT is a little town upon the coast of Massachusetts, not far from Lynn, situated near the head of a bay between Nahant and Salem. Off this ancient haunt of fishermen, at a distance of about nine miles, is a place called the "rocks," where, in the winter, the codfish come in shoals to spawn, and the striped bass sport themselves in the summer. During the winter months, be the weather what it may, unless the wind be rising for a gale, a little after midnight men may be seen going about the village, stopping here and there at houses, rousing the fishermen, who by and by gather in groups about the shore, each with his "dory," that well-known model of Yankee ingenuity which, at the great Berlin fishery exhibition, excited so much attention.

The dories and their owners are soon aboard the various schooners in waiting, and by five A.M. the fleet is at the "rocks:" so, when the daylight is sufficient, the dories anchor about their respective larger crafts, each boat with its single occupant, who is soon hard at work robbing the sea of its life. About three P.M. the signal is given from the schooners to come aboard; the dories hasten to their floating castles, with pitchforks the various "catches" are soon thrown aboard, and sail is made for home. During the passage the fish are gutted, the entrails cast into the sea, and the livers, some of them large enough to fill a quart mug, are put into baskets.

When the shore is close at hand, the fish are put again into the dories; but the roughness of the sea usually is such that these boats, when loaded, cannot land, and into the icy sea-water the horses are driven until the carts reach such a place that the codfish can be put in them, when off they go, to plod the night through for the early Boston market.

The livers are immediately sorted over, and the gall-bladders carefully removed. The great, luscious, flabby masses are thrown into a large oak tub; with this are connected steam pipes. When the receptacle is full and closed, low-pressure steam is turned on, and for about two hours and a half cooking goes on. Then the plugs are taken out at the bottom, and the hot oil streams into buckets. It is now placed in butts in the "cooling-room," and allowed to stay there until it freezes solid. So it is kept till opportunity offers, when it is put in canvas bags holding about four gallons each. These bags are then placed regularly upon a heavy oak table provided with outer grooves for conducting liquid, until twelve gallons are in a row. On this is laid a slab, then canvas bags, and so layer after layer, until about eighty gallons are piled up. A ton of pig-iron is then placed upon the top slab of oak, and the oil begins to flow out. In about twelve hours dripping ceases, and the apparatus is taken apart. Inside of the bags is found a yellowish butter-like mass as hard as tallow, which is nearly pure stearin, with liver débris and fibres. This goes to the soap-makers, whilst the oil finds its way to the Massachusetts General Hospital and other places where the superiority of the finest American oil over the Norwegian is recognized.

OPIUM IMPORTATIONS.

THE amount of some drugs imported into the United States is enormous. Thus, in 1880 there were brought into the country three hundred and seventy-two thousand pounds of opium, which is equivalent to nearly three millions of doses. But the United States is a large country,

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and so even this enormous number of doses means only one dose a year for every sixteen persons. When it is remembered how freely opium is used externally, it is plain that the quantity named is not beyond what is required for proper medical use, and that the opium habit, about which we hear so much, requires no perceptible allowance for its gratification.

LEADING ARTICLES.

CLEMENS'S TREATMENT OF DIABETES.

WE desire to call attention to the treatment of true diabetes, which in our country is very little known as yet, if at all, but which of late seems to have caused a revolution on the continent of Europe.

Dr. Theodor Clemens, a physician of Frankfort on-the-Main, who has made himself well known by several important contributions to modern therapeutics, remembered that the old Professor Heim, who at the beginning of this century enjoyed a great reputation all over Germany, had spoken very highly of the effect of arsenious acid in chronic intermittent fever. While further making investigations concerning the presence of sugar in the urine, Dr. Clemens noticed that in many cases of chronic intermittents of a severe character sugar was present in the urine* after each paroxysm; and it seemed to him that it was these cases which were rapidly benefited by a treatment with arsenious acid. Having found that bromine seemed to exert more or less influence in diabetes, he united the two, and it is his *Brom-Arsen-Liquor* which, in connection with other therapeutic measures, especially with the use of electricity, forms to-day the most successful and modern treatment of diabetes mellitus on the continent of Europe. To give, however, our readers the best and most accurate description of this treatment, and not to omit any important points, and to mention also the views of the author himself, we will follow in our article as much as possible Clemens's own words as he published them himself, after his cure had been tried successfully for several months by the most eminent specialists in Carlsbad.† We premise that his Liquor Brom-Arsen consists simply of a chemical union of arsenious acid and bromine, dissolved in water and glycerin in such a manner that two drops represent the twenty-fourth part of a grain of arsenite of bromine. The specialists who have tried this treatment and reported have met with such uniform success that the method well deserves to be considered seriously and to be tried in our country, our readers having the benefit of being the first on this side of the Atlantic to be informed of it.

Certainly nobody should have the hope, as Dr. Clemens expresses himself, of curing with brom-arsen any case of diabetes in the *last* stage. In this stage the process of nutrition is so disturbed that the effect of such a remedy in such small doses can be of no avail. It is to be regretted that there are so many cases of real diabetes which are not recognized in the first stage. But that even in advanced cases brom-arsen exerts a very beneficial influence and decidedly reduces the percentage of sugar Clemens noted as late as August of this year in a diabetic person in the last stage, who, notwithstanding the much-praised glycerin cure, was rapidly hurrying on to his grave, and whose existence was by this agent made more tolerable and undoubtedly prolonged,—a sign of the powerful influence of this remedy.† If the treatment with brom-arsen is begun only in the last stage, then six drops of the liquor daily (two drops three times a day) should form the first dose, which is gradually increased to nine and twelve drops per diem, each dose to be given in a wineglassful of water and immediately after a meal, which must consist mainly of meat. In the early stages it is well to commence with one drop three times daily, taken in the same way, and to increase the dose gradually till a decided impression is made upon the percentage of sugar in the urine; this dose then is continued as long as it exerts its influence in lowering this percentage; as soon as it loses that power, the dose is again increased, and this procedure is continued till the sugar has disappeared from the urine.

The favorable influence of this drug upon the thirst and the diuresis always soon makes its appearance, and synchronously the percentage of sugar in the urine decreases. It is also well to note that dia-

* Allg. Med. Zeit., No. 14, 1882.

† Loc. cit., No. 62, 1882.
‡ Loc. cit., No 62, page 794.

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betic persons can take larger—even very large—doses, for a very long time without any obnoxious effect,—a very important point in this disease, which generally is so very difficult to treat.

Sugar has transiently been met with not only in cases of grave intermittents, but also after sudden fright* and after onanistic excesses.† In one case after great nervous excitement sugar was found in the icteric urine. The oftener we look for sugar in the urine, the oftener will we find it present up to two per cent., without even decided functional disturbance and without existing lesions. Smaller quantities of sugar happen undoubtedly very often: we must remember, however, that especially in summer, when diabetic urine is so easily decomposed, minute quantities of sugar will escape detection. Clemens convinced himself of the fact: he divided diabetic urine into two parts, left the one to decompose, and added to the other part a few drops of thymol spirit.‡ Twenty-four hours later the urine to which the thymol had been added showed 0.38 per cent. of sugar, while in the other urine (without the thymol) neither by the polarization apparatus nor by the most sensitive reactions could any sugar be demonstrated. As small quantities are immediately destroyed as soon as fermentation begins, Clemens selected the thymic acid as anti-ferment, as it causes no impediment either in the polarization apparatus or with the other usual reactions. As it is proverbially difficult§ to demonstrate very minute quantities of sugar in the urine, the question is still an open one, whether such minute quantities of sugar are normally and continuously excreted by the healthy urine.

Concerning the diet of diabetic persons, Clemens adheres to the view of Schiff,‖ who, as is well known, does not believe in the total exclusion of hydro-carbons. It is, undoubtedly, difficult to decide whether the hydro-carbons which are introduced into the body as nourishment all leave the body perfectly changed into sugar. That in grave forms, especially during the last stages, of diabetes, the albuminates also participate strongly in the formation of sugar,¶ Clemens has demonstrated by administering certain definite nourishment and then making a quantitative analysis of the sugar in the urine: the quantity continued in such cases the same even if all hydro-carbons were carefully excluded from the diet. There can be no doubt that we have to assume for these and many similar cases different etiological moments, —*i.e.*, a different seat of the original morbid lesion; and it is here that Clemens and other modern authors make a decided distinction between diabetes due to liver and diabetes due to cerebral affection. In case the diabetes has its morbid seat originally in the liver, of which we know that it normally has a glycogenic function, we may regulate the diet as much as we will, the quantity of sugar in the urine will be very little affected by the percentage of hydro-carbons in the aliments; and here we will never succeed in gaining a urine perfectly free from sugar. Clemens noted the gradual development of diabetes in a *savant* who overstrained his brain continuously. In this case the quantity of sugar in the urine was less augmented by the addition of hydro-carbons to the diet than by mental strain. After each mental strain the percentage of sugar increased. The patient did not follow Clemens's advice:

> "Leb' mit dem Vieh als Vieh
> Und acht es nicht für Raub
> Den Acker, den du pflügest, selbst zu düngen,
> Das ist das beste Mittel, glaub',
> Auf hundert Jahr' dich zu verjüngen."**

The consequence was that he died a few years later, with comparatively little sugar in the urine, in the insane asylum. Here any abnormal function of the liver was of no consequence, compared with any error in diet the brain made: these errors were here the cause of the diabetes, and later that of insanity. It is further very remarkable that the well-known obesity which in the prodromic stages of liver-

* Sudden and great emotions not rarely form the only known causing elements of diabetes, as they exert their influence on the two important organs from which diabetes may start, the brain and the liver. Clemens found also sugar in the urine after severe paroxysms of pain,—for instance, after severe seizures of gout.

† Clemens demonstrated in many such cases the presence of sugar in the urine, and he ascribes the fact to irritation in a high degree of the spinal cord and the cerebellum. That diabetes may really develop itself if these excesses are carried on for a long time can hardly be doubted.

‡ Thymol 2.0: alcohol 30.0: of this mixture a few drops are sufficient to prevent fermentation in diabetic urine.

§ Pflüger's Archiv für Physiologie, Bd. v.

‖ Schiff, Untersuchungen über die Zuckerbildung in der Leber. Wurzburg, 1879.

¶ Seegen, Beiträge zur Casuistik der Mellituria, Virchow's Archiv, Bd. xxi. Abeles, Ueber minimale Mengen Zucker im menschlichen Harn, Wiener Medicinische Wochenschrift, 1874.

** Live with the animals, and as they do:
Do not consider it robbery
To self-manure the acres which you plough;
This is the best means, be assured,
To make you younger for a hundred years.

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diabetes always precedes* the actual diabetes is never found in cases of brain-diabetes. There is not a solitary case of the kind on record. Persons in whom diabetes develops itself from brain-lesion are always thin, as most brain-workers are. Such persons usually digest large quantities of fat, and the addition of fat to their common diet seems always to be followed by beneficial results: even the percentage of sugar in the urine will be diminished in such cases by the administration of fat. Clemens even gave cod-liver oil in such cases, and with good effect, notwithstanding it had been the rule to avoid sedulously anything in diabetes which might be a burden to the liver.

Another point of interest, and one which might be made use of for diagnostic purposes, like those just mentioned, is the fact, also first observed by Clemens, that we find in the urine of diabetic persons a decided diminution in the normal percentage of chloride of sodium. This decrease, if once demonstrated, is always the beginning of the end. Just as the prognosis in certain inflammations, as pneumonia, is always worse the more the chlorides disappear from the urine, so is the gradual diminution in the percentage of chlorides in diabetic urine always a bad omen, and their total disappearance invariably of very bad augury. It is a sure sign of rapidly approaching dissolution. Clemens noted this very strongly in a diabetic individual who was trying to cure himself by glycerin: the chlorides disappeared, and within a few days paralysis of the heart set in, followed by death. If glucose takes the place of the salt in the blood, the natural stimulus of the heart is soon lost, and the organ ceases its function.

Perhaps the most important adjuvant, if not a real curative agent, in the treatment of diabetes, is electricity. Its application in this disease has a scientific basis, as we have to do here with a faulty process of oxidation. Clemens began by letting his patients inhale twice daily oxygen developed by electricity.† In these diabetic patients he regulated the diet carefully and controlled the excretion of sugar. Within a few days the percentage decreased far more than would have been the case from simple regulation of the diet alone. He now added *séances*, in which he permitted electro-static currents of sparks and shocks to pass through the liver, and also allowed electro-static discharges to pass through different parts of the body, and the result was a still more favorable one. He achieved the same object by employing induced currents in the direction from the back of the neck to the liver, so that the latter was set into light motion. Even very strong shocks, if sent through the liver by electro-static discharges, seemed to be very beneficial, notwithstanding the organ is very sensitive to electro-static discharges. The decrease in the amount of sugar in the urine has so far in every case been so apparent after this employment of static electricity that it would be well to give this treatment more extensive trial in our own country.

Diabetes seems to be on the increase in the United States. We have here to do especially with the brain variety. I do not believe this increase to be due to the fact that the urine is now more carefully examined for albumen and sugar, but I incline to think that as our former generations have been noted for their go-ahead manner of doing business, the power of resistance of the present and coming generations—all continuing the same style of rapid living and overstraining the mental powers, without taking that rest which persons similarly situated in the old countries do, and which is so imperatively needed—becomes less, and we are therefore more liable to those destructive diseases which show a halt in the progressive restitution of tissues. When the etiological moments are present, the urine should always be examined for sugar, and the treatment here described immediately instituted and causing elements removed.

HUGO ENGEL.

577 FRANKLIN STREET.

* Der Diabetes Mellitus auf Grundlage zahlreicher Beobachtungen, dargestellt von Dr. J. Seeger. 2. Aufl., Berlin, 1875. Verlag von August Hirschwald. Cap. II.—Diabetes und Fettbildung.

† Die Electricität als Heilmittel. Ein Wort zur Aufklärung und zum Vorständniss electr. Curen und electr. Heilapparat, von Dr. Th. Clemens in Frankfurt-a-M. Verlag von Benj. Auffarth, Frankfurt-a-M., 1882, p. 78.

THE Trustees of the University of Pennsylvania, at a recent meeting, appointed Dr. J. B. Deaver to fill temporarily the place of Dr. Charles T. Hunter as Demonstrator of Anatomy, a measure rendered necessary by the continued sickness of the present incumbent. Dr. Richard H. Harte was elected Demonstrator of Osteology and Syndesmology.

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CORRESPONDENCE.

LONDON LETTER.

THE work of the medical schools is now in full swing, the teaching of practical anatomy being somewhat hampered by lack of subjects for dissection. This does not mean that the low death-rate of London is falling to that point that no impecunious person will die to oblige teachers of anatomy, but that there is some game up betwixt the parochial subordinates at the workhouses and the low-class undertakers who bury paupers. Some relative or pseudo-relative is found and put forward to claim the body of the defunct, in order that it may be interred at the expense of the rate-payers, with a trifling margin of profit to the undertaker; and so the dissecting-rooms are starved.

The entry of students is good. The recent history of Guy's Hospital is telling so upon the reputation of that noble old institution that it is receding in favor, while the London, ever so far east, is coming forward to hold the second position next to St. Bartholomew's among the large hospital schools. The new railway passing close to the London Hospital has had much to do with thus bringing it practically so much nearer the West End; while with such men as Dr. Andrew Clark, Dr. Langdon Down, Dr. Hughlings Jackson, Mr. Jonathan Hutchinson, Mr. Cowper, Mr. Walter Rivington, and Mr. Reeves, the inducement to study at the London is certainly strong. Dr. Sutton, too, is well known as a pathologist, while Dr. Fenwick is a recognized authority on diseases of the stomach, as well as a writer on medical diagnosis. There are, too, some younger men, who will uphold the reputation the present staff may earn. The London Hospital, a few years ago, was enlarged by the addition of a new wing, and is now the largest hospital in London. Situated as it is near the docks, it presents a fine field for the study of surgery. Surrounded by such a population as exists in Whitechapel and its neighborhood, it furnishes ample opportunity for the study of severe disease, and especially such as is linked with alcoholic excess and syphilis.

The figure of Dr. Benjamin Ward Richardson is unique in medicine. At present he is best known to the world as an ardent teetotaller and a sanitarian,—sometimes a little whimsical, as when he propounded his Hygeia, or ideal city of health. But from this to conclude that Dr. Richardson is crotchety is quite a mistake. He has always held his own views and supported them ably. Born in the Midlands, he studied in Glasgow, and, from a remark in his Asclepiad, was evidently assistant to a general practitioner in the country in his early days. But he soon came to London, and took a prominent position as a scientific physician. He gained his Fellowship of the Royal Society by his researches into the causes of the fluidity of the blood, which he held to be largely due to the ammonia contained therein; and he has always been the consistent advocate of ammonia freely administered in cases where a blood-clot is suspected to be forming in the cardiac chambers. For these researches he gained the Astley Cooper prize. For years Dr. Richardson gave lectures on various subjects to classes of medical men who gathered to his house, and was the most advanced physiologist of his day, before the regular trained physiologists like Burdon Sanderson or Michael Foster had sprung up. His name is indissolubly connected with the ether spray for producing local anæsthesia, as one contribution to practical medicine. Then he invented a painless knife in the form of a wheel-blade revolving so swiftly as to cut without inflicting pain, by means of which he sliced off pieces of the ears of rabbits while they continued nibbling leaves, showing how little they suffered from the amputation. But this came to no practical use. Then his researches in chloral hydrate did much to clear up the action of this agent upon the organism. His observations on alcohol, amyl nitrite, and allied bodies proved how far these agents dilated the arterioles, and led Dr. Lauder Brunton to resort to nitrite of amyl in a case of angina pectoris, with the result that amyl nitrite is now extensively used to relieve conditions depending on arteriole spasm; and its use in practical medicine has brought an allied body, nitro-glycerin, into notice, which is proving itself to be a most useful medicinal agent for the purpose of filling the arterial system or relieving arteriole spasm. Then, too, Dr. Richardson has experimented largely on anæsthetics, and advocated the use of the bichloride of methylene instead of chloroform, as being safer. His acute intellect, too, made observations in clinical medicine of the highest practical importance. To him we owe more than to any one else our present knowledge of irregularity and intermittency of the heart as neurosal affections utterly disassociated from organic lesions, with which, before his day, these phenomena were too invariably linked. He collected an array of cases which proved beyond all reasonable doubt that frequently such disturbance of the cardiac rhythm was nothing more than a nervous matter, devoid of significance, by which he did much to relieve humanity from that demoralizing dread—viz., a haunting suspicion of some occult disease of the heart—which is much worse than a knowledge that some actual disease does exist. Hundreds of persons who are relieved from their fears by the physician's positive statement that there is no organic disease, and that the halt or the disturbance in the rhythm of their heart is purely connected with the nervous mechanism, know no more than perhaps the medical man him-

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self that the comforting assurance which lays their fears and dreads at rest is due to a great extent to Dr. Richardson, whose enthusiasm as to total abstinence they may have been deriding as the dream of an enthusiast. Then his essay on uræmic coma was one of the path-breaking contributions to practical medicine. Dr. Richardson was for some years physician to the Royal Hospital for Diseases of the Chest. While thus engaged in scientific research and practical medicine, Dr. Richardson was ever a literary man. His writings are clear and lucid, while his language is well chosen and elegant. Since Sir Thomas Watson, no one in medicine has had the command of a style so attractive and so charming as Dr. Richardson,—not even Sir James Paget himself. At present he is engaged on a life of Bichat. With him literature is a hobby, just as Seymour Haden and Sir Henry Thompson paint in their spare moments. There long existed an impression that if a medical man knew anything out of his profession he could know little of it, or at least have little acquaintance with the latter practically,—an impression most unjust to many. Because a man is without other culture, therefore his intellect is completely devoted to his profession, was a view which it was convenient for a good many medical men to do their best to keep up and disseminate. But the tendency is setting the other way. If a medical man manifests good sense and acumen in other matters of which the public can judge, they are now inclined to give him credit for like qualities in his profession,—an act of justice which the public is readier to render than the medical man's professional brethren, it is to be feared.

Beyond his associations with literature, Dr. Richardson is an enthusiastic sanitarian, ready to help all good work to improve the health of the people. As such he has been known to the public for years. Some time ago the genial doctor gave up alcohol and tobacco, and now is as prominent a champion for total abstinence as Sir Wilfred Lawson himself. When Sir Walter Trevelyan died, he left his cellar of wine to the doctor. The deceased baronet, though a total abstainer, had too much respect for the wine to start it down the gutter, as did one prominent teetotaller his cellar on his conversion: so he bricked it up. The doctor probably would have been glad if the wine had gone to the pigs, for his legacy was a bother to him. He had more good taste than to waste the wine, yet what to do with the deleterious beverage he did not know. So the wine remains, and the press has given over chaffing the doctor on the matter. That portion of society which is not disposed to abandon alcohol has decided that Dr. Richardson is an enthusiast; and though his decision—or perhaps rather the absence of it—about this wine-treasure should have saved him from the charge, still it is pleaded. Be this as it may, the world is always ready to hear what the doctor has to say; and recently Finsbury has asked him to be its representative at St. Stephen's. It is to be sincerely hoped that he may be returned, for it is very desirable that our profession be represented in the House of Commons. No doubt Dr. Farquharson is a medical man not unknown in medical literature, and a man of some good sense; but then he represents West Aberdeen as a local laird, not in any sense as a medical man. Whether they will always be in agreement with him or not, the Commons will listen with interest and respect to the winning eloquence of the teetotal doctor. Dr. Richardson is a capital speaker, who carries his auditors away with him. His eloquent dark eye, his grand brow, his solid figure, tell of a man of no common parts, while his familiarity with public speaking fits him for the House. As a talker he is, in my opinion, unequalled, when with a group around him he stands the only speaker, all too willing to listen to interrupt him.

The presence of a medical man like Dr. Richardson in the House of Commons and on committees would do much to advance medical interests and to nip in the bud schemes which are injurious to the medical profession. His presence, too, will be of unspeakable value in putting a check on the rampant party who see in vaccination nothing but the state-sustained means of spreading disease, and who are disposed to dispute the position of medicine proper in favor of any ism or fad which may choose to assert its superior claims to the confidence of humanity in blatant tones. Further, it is very desirable that the House of Commons should no longer consist almost entirely of country gentlemen, successful business men, or struggling barristers. There are now working men in it; and Prof. Thorold Rodgers worthily represents Southwark. With J. Allanson Picton for the Tower Hamlets, and Dr. B. W. Richardson, F.R.S., member for Finsbury, the metropolis will set an excellent example to other constituencies, while the leaven so furnished would leaven the mass of M.P.s in a desirable manner.

A curious case of lead-poisoning is reported from Keighley, in Yorkshire, a manufacturing town which some time ago rendered itself notorious for its opposition to the existing law of compulsory vaccination. Sooner than enforce the law, some guardians went to prison. Nor was the constancy of these modern martyrs shaken by the fact that there had been a severe outbreak of smallpox in their ill-vaccinated town,—severe enough to have brought most authorities to their senses. Dr. Dobie writes, "During the last few years numerous cases of chronic lead-poisoning have occurred in Keighley. The mischief has been traced to the town's water, which, although very useful for certain domestic and commercial pur-

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poses, has an unfortunate propensity for taking up lead. Much sickness and suffering have occurred as a consequence, but no fatal result took place until last August, when Wilson Riley, a machinist, who had immediately before death shown well-marked symptoms of the disorder, died." It seems a great pity that the water of the town shows such an immoral propensity—though one is not in the habit of hearing water spoken of as a moral agent—for poisoning the inhabitants, when so well suited to their manufacturing wants; though there is nothing about Keighley to indicate that it is unduly given to drinking water,—at least, that is apparent to a visitor there. Be that as it may, the said Wilson Riley, who had been out of sorts, went away for his health, returned, grew worse, had headache, pains all over, vomited, became unconscious, and then died. Whatever kind of individual Wilson Riley may have been in his lifetime, and however pacifically disposed, he has caused some local commotion by his death. When Riley became seriously ill, he developed a well-marked blue line along his gums; and, on inquiry, his wife averred that "he was the first to use the tap in the morning," and that he drank freely of the water, though there is no hypothesis of any glycosuria to account for such an extraordinary practice on the part of a native of Keighley. It appears that two years previously he had consulted Dr. Dobie for colic and constipation, and that at that time there was a blue line on the gums. Consequently, the coroner was made acquainted with the facts, and an inquest was held in order to inform the folks of the deleterious quality of their water. So a post-mortem examination was made, and the results attained were that the heart was hypertrophied and the kidneys granular. The left wrist drooped, and the colon was constricted and thickened. So the viscera were sent away for analysis, when a notable quantity of lead was found in the liver and spleen. Then followed an analysis of the water, which showed that the peccant fluid contained no less than three-fifths of a grain of lead to the gallon,—a fact which is scarcely calculated to stimulate the total-abstinence movement in the Keighley water-district. It appeared at the inquest that no less than sixty-four cases of chronic lead-poisoning had been reported to the local board about a year previously. Riley might have had granular kidneys, but their condition was scarcely so advanced as to cause death. The lead in the water was evidently the main culprit. The fact that persons with granular kidney, as the gouty, for example, were liable to be specially affected by lead does not seem to have been advanced by the local board in its defence of its water; but they called Dr. Meymott Tidy, the analyst, from London to clear away the imputation upon the water. Dr. Tidy thought the case might have ended fatally without any saturnine intoxication; nor was there such an amount of lead found in the viscera as was compatible with the view that it was the cause of death. The fact that the patient had been taking iodide of potassium did not affect his opinion. It did not eliminate lead from the system, but rather tended to leave the lead in an insoluble and inert form, he explained to the coroner, who, if impressed with this information, will hold views opposed to all medical teaching. A medical witness then quoted Dr. Chambers's lecture, in his "Lectures chiefly Clinical," about the utility of iodide of potassium in lead-poisoning, but that did not affect Dr. Tidy's opinion; but, if it did not, it impressed the coroner, apparently. The coroner charged the jury; the jury retired, and, after deliberating for two hours, declared that, in their opinion, the deceased, "Wilson Riley, died from granular disease of the kidneys, how caused we are unable positively to say, but that death was accelerated by lead-poisoning."

There is something absolutely pathetic about an ordinary coroner's jury considering the causes of granular degeneration of the kidneys and formally recording their inability to decide in the matter, which puts all risible feelings into the background. That twelve lay householders should have failed to determine one of the most occult matters of pathology reflects no discredit on the intelligence of the people of Keighley; but the assurance or simplicity of their attempting the problem stands in a curious contrast to their views about the value of vaccination. The local medical men are on their defence against the evidence given by the London expert. They have brought a most damaging charge against the water-supply of Keighley; and their disinterested conduct in exposing what was certainly a source of profit to them, and, to a less extent, to the undertaker, is deserving of all praise. But it does not follow that Keighley is going to bother about a new water-supply, any more than it tried to enforce the Vaccination Act.

J. MILNER FOTHERGILL.

BALTIMORE, MD., November 16, 1882.

EDITOR PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—In your number of November 4 (p. 87) you quote, with comments, a statement made by the *Maryland Medical Journal*, that the trustees of the Johns Hopkins Hospital propose opening that institution next autumn. The following item, from the *Baltimore Sun* of this morning, would seem to show that this is an error:

"The trustees of the Johns Hopkins Hospital held an adjourned meeting yesterday, to discuss the matter of fixing a time for the opening of that institution. A report from a

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committee was presented, which named the autumn of 1885, and not later, as the time for opening the hospital; and this was discussed and finally adopted by a majority of those present. Mr. Garrett and Prof. Smith opposed the postponement of the opening longer than one year, and took the ground that the institution should be ready for receiving patients by the autumn of 1883. These two gentlemen have united in a report to prove the feasibility of opening the hospital in the time named,—a year hence. They argue that part of the institution may be open to the public while the buildings and surroundings are being completed. It was understood that Mr. Garrett considers the question may be brought up at a fuller meeting of the board, and that the action looking to a postponement of the opening until 1885 may be revised. Mr. King said the hospital buildings are under roof, and the work is progressing favorably. He said the trustees of the hospital were a unit in favoring the early opening of the institution, and the only difference of opinion was as to the time when it could be successfully done."

The total cost of the buildings to this date is about nine hundred thousand dollars, as I learn from good authority. It seems to me that the decision to postpone the opening until at least one hundred and fifty beds are in readiness is a wise one. It is highly desirable that the medical department of the university should be organized before the hospital is opened; certainly the clinical teachers should at all events be selected. It would be a great pity to run the risks of the complications and disappointments which must follow a premature opening before the university is ready to co-operate.

Yours very respectfully, X.

PROCEEDINGS OF SOCIETIES.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

A CLINICAL meeting of the Society was held at the hall of the Society, Philadelphia, October 18, 1882.

DISCUSSION ON DR. FORMAD'S PAPER, "THE BACILLUS TUBERCULOSIS," ETC.

Dr. Joseph C. Richardson remarked that he had several years since reported a remarkable case of diphtheria, in which a child died with the whole outer surface of the throat—which had been abraded by mustard plasters—covered with false membrane, the exudation having at that time disappeared from the pharynx, where it was abundant earlier in the attack.* He also desired to call attention to one of the analogies which might be found in nature to the germ-theory doctrine of different disease-germs being microscopically indistinguishable, yet capable of developing into the causes of totally diverse contagious maladies. Dr. Formad had stated it was improbable that distinct varieties of similar micrococci to the number accused of causing smallpox, measles, scarlatina, etc., could exist; and yet if you took the spermatozoids of an African, a Malay, an Indian, and a Caucasian,—notwithstanding they were exactly alike morphologically, chemically, and in their reaction with staining fluids,—and introduced them into suitable culture apparatus, you would find them, after a suitable number of months, so developed that they differed from one another as much as black does from white. In the same way, it was possible that the micrococcus of diphtheria, for example, might be quite indistinguishable, with our present means of observation, from the micrococcus of typhoid or of yellow fever, and yet possess entirely different developmental powers; and this seems the more probable because for ages the germs of the contagious diseases have been known to "breed true," and produce the same series of symptoms in successive generations of the human race.

Dr. Richardson further explained the theory he had, as stated by Dr. Formad, long advocated,—that the lesions in zymotic diseases are largely due to the mere *mechanical pressure* and *mechanical obstruction* produced by millions of micrococci. In this connection he desired to say that, although an ardent believer in the germ-theory of disease from a time when such a profession was less honorable than at present, he agreed with Dr. Formad that more proof is necessary before we can accept Dr. Koch's so-called discovery, first, because, according to this theory of mechanical action by the heaps and masses of the vegetable parasites, we ought to find the bacilli in great abundance in tubercular nodules, whereas it is stated by some investigators that they are often so few in number as to render their demonstration no easy matter; and, second, because it is difficult to believe that where, for instance, the grandchild of a consumptive man dies tuberculous (its father remaining healthy), the germs of Bacillus tuberculosis have been transmitted through two generations of spermatozoids with their fatal powers of injuring the human organism unabated. As a means of explaining some of the curious phenomena of tuberculosis, and also of syphilis, he had for years taught the provisional acceptance of the graft-theory of disease.

Dr. Bruen called Dr. Formad's attention to the experiments of Dr. Hippolyte Martin, of Paris, who holds that tubercle is an infective malady originating in a specific virus, and that its propagation arises solely in the transferrence of this matter from person to person. By this one peculiarity does he distinguish between true and false tubercle. True tubercle produces general tuberculosis from a local

* See Philadelphia Medical Times, July 10, 1875.

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infection, the virus increasing with successive inoculations, whereas non-tuberculous matter produces, after inoculation, local tubercle, but inoculation from this second tubercle is quite powerless to produce general tuberculosis. Anatomically, pseudo and true tubercle are indistinguishable. The only true test is inoculation, as above.

Dr. Bruen also cited experiments by Tappeiner-Berthan, Weichselbaum, of Vienna, who caused dogs and cats to be confined in rooms into which a spray was introduced carrying in solution sputa from tuberculous patients. Tuberculosis was established in all these cases. Animals placed in rooms filled with non-tubercular spray survived healthy.

Giboux, of Paris, also has confined rabbits in a cage in a room into which he forced twenty to twenty-five litres of air taken from lungs of tubercular subjects. General tuberculosis always ensued; but if the animals were confined in cages in apartments supplied with the same amount of air filtered through carbolized tow or cotton, no disease ensued.

Dr. Bruen also quoted some filtration experiments of Koch, who mixed the bacilli in fluids from tubercular patients, and then filtered these fluids through porous earthen jars. The fluid sweated through the jars was always innocuous; but the material remaining in the jar with the bacilli produced tubercle.

Dr. Bruen thought these experiments should be repeated, since in some form tuberculosis has seemed slightly contagious from a clinical stand-point.

Dr. Bartholow said that, since he had been called on by the Chair, he would make a few observations on three points. Dr. Formad alluded rather slightingly, it seemed to him, to the work of Cohnheim. It would be rather singular to have any one at this time set about his defence. If Cohnheim had done nothing else than demonstrated the migration of the white corpuscles, and shown the importance of terminal arteries as factors in pathological processes, these would be sufficient, surely, to give him a foremost place among the pathologists of our time.

As regards the infective nature of tubercle, and the relation of a minute organism thereto, he had been disappointed that Dr. Formad had nothing to say of those remarkable filtration experiments by which the parasite was separated from the medium in which it was contained. It was thus ascertained that when separated the fluid without organisms had the same infective property as before. If these observations be confirmed, they would seem to indicate that the organisms have a part in the production of the infective principle without actually being this principle. They would, from this point of view, have a sort of catalytic action, just as the yeast-plant has in ordinary alcoholic fermentation.

The third point to be noted is the clinical experience showing the communicability of consumption. How much soever we may disagree about the Bacillus tuberculosis, clinical observers have been recording many examples of apparent transmission of the disease. Dr. Webb, of this city, for example, has published several very striking instances. Leudet, of France, has also lately recorded a number of observations. Indeed, it is a matter of common observation that a phthisical wife is apt to be followed by a phthisical husband, and *vice versa*. Whether or not we admit the reality of Koch's discovery, we must assent to the doctrine of the specificity of tubercle.

Dr. James Tyson said that in order to establish the proposition that bacillus is the cause of tuberculosis, two conditions must be proved: first, that the inoculation of the bacillus, pure and unadulterated by foreign material, is capable of producing tuberculosis; second, that the inoculation of no other substance resulted in the disease. Whether the former can be done—that is, whether the bacilli, by culture, can be obtained thus unadulterated—was a question he did not feel qualified to decide, but that tuberculosis may be produced by the inoculation of matters other than tuberculous he did not think could be denied by an unprejudiced observer. Hence he must consider the proposition not proved.

Dr. Tyson thought that, while our skill in microscopic manipulation had been greatly sharpened, and the results of the use of the instrument are much more reliable than formerly, we have not yet acquired such mathematical accuracy as to avoid errors of interpretation by the best observers. It is still true that two observers may look at the same object through the same microscope and with the same amplifications and draw different conclusions from the same picture, and, reasoning on these conclusions, come to still more diverse results. Every discovery of the kind claimed by Koch, together with the numerous observations which grow out of it, is a part of the school of training which is finally to fit us to solve this and similar problems.

In the matter of the filtration experiments referred to by Dr. Bartholow, Dr. Tyson said that the results of attempts to filter out bacteria from septic fluids were at least unsatisfactory, and, if he recalled them aright, the fluids from which it was attempted to remove the bacteria retained to a degree their virulent properties, while it was impossible to deny that in removing the bacteria, other elements in which noxious properties might reside were also eliminated.

As to the repeated recurrence of diphtheritic membrane on localities whence it has been stripped, alluded to by Dr. Richardson in evidence that diphtheria is a constitutional disorder, Dr. Tyson said such recurrence was simply the result of the intensity of the local inflammation. Wherever inflammation is sufficiently intense, fibrinogen and fibro-

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plastin are exuded, and from their union results the fibrinous or diphtheritic deposit; and so long as such intensity remains, the diphtheritic deposit will be reproduced.

Dr. J. Solis Cohen desired to express his individual estimation of a portion of the remarks made in Dr. Formad's demonstration, which had not attracted comment from the previous speakers, and which he believed to be of far greater importance than the most elaborate speculations about a bacillus. He alluded to the anatomical point advanced as a probable determining factor in tuberculosis,—a point which could be readily decided by observation, and which, if confirmed, would certainly stamp the evening with the impress of a new and important era in our comprehension of the pathology of tubercle and tuberculosis.

If he understood the lecturer aright, the views advanced might be concisely expressed as follows: that tubercle is the result of inflammation occurring in animals or human beings possessed of a peculiar abnormal anatomy,—*i.e.*, a narrowing of the lymph-spaces in the connective tissue,—and that, owing to this limited size of the lymph-spaces, these channels become choked up with the mass of young cells developed in the course of the inflammatory process, whether from the tissues themselves or from the wandering white blood-corpuscles. These accumulated inflammation corpuscles, being thus prevented from undergoing absorption as in inflammatory processes occurring in tissues with normal-sized lymph-spaces, form the granulation tubercle, here and there becoming massed into nodular tubercle, which, incapable of absorption and unprovided with blood-supply for its maintenance, must necessarily perish.

Furthermore, the lecturer had stated that he had determined the anatomical fact that in animals readily tuberculizable, such as the rabbit and guinea-pig, and in scrofulous children and in adults the subjects of tuberculosis, the lymph-spaces were small; while in animals not readily tuberculizable, as the dog and cat, and in the healthy human subject, these lymph-spaces were large; and that upon this fact he founds his theory.

The speaker believed it generally admitted that those animals readily tuberculized under ordinary laboratory experiments are by no means so liable to tuberculosis under the experiments alluded to if they are well fed and allowed plenty of air and freedom of motion; while, on the other hand, it was equally acknowledged that animals which are ordinarily exempt from tuberculization, as cats and dogs, are rendered tuberculizable under these experiments if closely confined and deteriorated by insufficient nourishment and want of fresh air, as exemplified in one of the personal instances mentioned by Dr. Formad.

Now, the transmissibility of tuberculosis from wife to husband, or, as is much more frequent, from husband to wife, might be explicable on the hypothesis that want of regularity in meals and in diet, lack of efficient ventilation, want of muscular movements to keep the connective tissue of the nursing wife in proper extension, might artificially produce such diminution in the capacity of the lymph-spaces as to approach the condition described by Dr. Formad as normal in tuberculizable animals, and peculiar to scrofulous children and adults predisposed to tuberculosis. What would otherwise be a slight cold or a moderate inflammation excited in the bronchial tubes or alveoli of a nursing wife, might, under such circumstances, without any infectious character whatever, arouse a tuberculosis which would not have occurred had the wife been regular in her diet and careful to secure sufficient bodily movements in the fresh air. Dr. Cohen recognized an important clinico-pathological relation between Dr. Formad's theory and proper hygienic prophylaxis, which accounted for the benefit received by fresh air, good food, and efficient muscular movements in individuals predisposed or exposed to tuberculosis, and he therefore warmly seconded Dr. Formad's request that a committee be appointed by the Society to investigate this point, and determine whether the condition of the lymph-spaces in the instances mentioned had any positive relation to tuberculosis or to tuberculization.

As to the bacillus of tubercle, he knew nothing from personal observation, and therefore refrained from engaging in its discussion.

Dr. Dulles said he thought the Society and the community owe thanks to Dr. Formad for publicly opposing the theories which had been advanced by Koch and accepted with a most astonishing avidity by the profession. There is nothing more tempting than the idea of having a complete theory in regard to an obscure subject, and there is nothing which has done more damage to the true progress of science than the hasty adoption of false theories which this temptation has led to. Koch's theory in regard to tuberculosis may be true, but as yet it has not been at all satisfactorily proved; and the truth in regard to it is more likely to be discovered if it meets with opposition instead of being at once yielded to. It will thus be put to proof, and fall if it be false; while, if it be true, it will be all the more surely established.

A NEW EPILATING FORCEPS, DESIGNED BY DR. CUMMISKEY, AND MADE BY D. W. KOLBE & SON, OF PHILADELPHIA, PRESENTED FOR EXAMINATION TO THE SOCIETY.

Dr. Cummiskey said that the idea of a specially-designed forceps for epilating purposes was not a new one, as Bazin had described two instruments, which, though smaller, doubtless served the purpose very well. This instrument has two ends, the small end measuring one and a half centimetres in length and

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Guarana.
Helianthella.
Honduras Bark.
Horsemint.
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seven millimetres in width, and the large end measuring one and a half centimetres in width and seven millimetres in length. The whole length is fifteen centimetres. It is about twice the size of the instruments described by Bazin, and therefore enables the operator to proceed with greater facility. The smaller end is used first, and after the thickly-grown hairs are pretty well got rid of, then the larger end is used to remove the remaining scattering hairs. Some attention should be given to the preparation of the part to be epilated. The hair should be cut short,—to within one-eighth of an inch of the skin,—and for a day or two previously oil of cade should be applied several times a day, to render the extraction less painful. Blistering with cantharides will also effect the same purpose. Hairs much diseased are removed without pain and come out readily; but where the diseased and healthy hairs are more or less mixed together, the operation must include all, and then there must be some pain experienced, which is greater or less according to the care used in preparing the part for the operation. The crown, the temples, and the fringe extending from behind the ears along the upper part of the neck are the parts where epilating is most severe, and upon these places recourse may be had to ether, chloroform, or tincture of aconite to diminish pain. In using the forceps, care should be taken not to allow the blades to open more than just sufficient to grasp a very narrow line of hairs; for when too wide a grasp is taken, hairs are broken off, and the part must be gone over again. The extraction should be made in the direction of the hair-growth, and after a small portion is denuded thoroughly the oil of cade should be well rubbed into the skin.

This instrument will greatly facilitate the tedious operation of epilation, and by its early use doubtless be the means of preventing permanent alopecia, which, in neglected cases of parasitic diseases of the hairs, is greatly to be feared.

INTERNAL USE OF CHRYSOPHANIC ACID FOR PSORIASIS.—A case of general psoriasis treated by chrysophanic acid internally is reported in the *Lancet* (No. 17), of a girl, 13 years of age, in whom the disease had existed six months. The acid was gradually increased from gr. ¼ to gr. ii in the course of three months, but improvement was slow. Vomiting was frequent. The drug was afterwards used locally (gr. xx to vaseline ʒi), after which rapid improvement took place, a cure resulting.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

STATED MEETING, OCTOBER 9, 1882.

The PRESIDENT, Dr. JAMES TYSON, in the chair.

Myxomatous tumor of the posterior cervical region. Presented by Dr. NANCREDE for Dr. W. G. MACCONNELL.

THE tumor was removed by Dr. J. H. Brinton, at the Jefferson College Hospital clinic, some ten days since. The patient was a little boy, aged 4 years, whose parents had first noticed the growth about two years ago. Latterly it had grown with considerable rapidity. It was of firm consistence, lobulated, and movable beneath the skin, giving the impression that it was a fibrous tumor. After removal, in addition to the above-mentioned characteristics, it was found surrounded by a capsule, and on section looked somewhat suggestive of myxoma; still, it was thought by some to be merely a fatty tumor containing more fibrous tissue than usual.

Microscopic examination by Dr. MacConnell.—Upon examining a frozen section stained with iodine, meshes of capillaries are seen, in the walls of which the endothelial cells composing the vessels can be distinctly seen. The aforesaid meshes contain the mucoid structure traversed by large pale fusiform cells, the processes of which anastomose with each other. In addition, many leucocytes are seen, and interspersing the growth in every direction numerous yellow elastic fibres are readily distinguished.

When presenting the specimen, Dr. Nancrede commented on the rarity of such growths.

Dr. S. W. GROSS said he had himself presented several gelatinous polypi of the nose a number of years ago, which were most characteristic examples of myxomatous tissue. He could also recall a specimen of subcutaneous myxoma of the forearm, as well as the hæmatoid myxoma of the breast referred to by Dr. Nancrede. He was disposed to consider it the rarest of all neoplasms of the breast; indeed, he had never personally met with one; and when preparing his work on tumors of the breast, he had written to numerous surgeons throughout the country, who all replied that they had never met with one affecting the breast.

Dr. FORMAD remarked that he had exhibited a myxomatous fibroma of the labium some years since, and said that the peculiar milky appearance assumed by the fluid when such

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growths were thrown into alcohol was a good diagnostic point.

Dr. SHAKESPEARE said that his personal experience as to the rarity coincided with that of Dr. Gross. This specimen is one of the rarest forms, as most of the fibrillæ consist of yellow elastic tissue. The rarity of myxomatous tumors seems to him to have much bearing on the views of Cohnheim and others as to the etiology of tumors. The observers insist that all tumors spring from the remains of fœtal tissues not made use of in tissue-construction, which remain dormant in their embryonal condition until subjected to some irritation, when they develop into the various neoplasms. Now, tissue practically identical with that found in myxomata pervades the fœtus. How, then, is it that portions of this do not remain to give rise to myxomata? On the contrary, myxomata are among the rarest of the neoplasms.

Specimens from a man who died with brain, lung, heart, liver, spleen, kidney, and bladder lesions. Presented by Dr. J. T. ESKRIDGE.

The specimens showing the above lesions were removed from the body of a man aged 68 years. The patient had become deaf in the right ear thirty years before, while suffering from some brain-disturbance. Attacks of jaundice, with gradually increasing permanent discoloration of the skin, had extended over a period of ten years. Since 1877 he had complained of incontinence of urine, an oppressed feeling over the hepatic region, dropsy in the feet and face, and a gradual loss of flesh and strength. The two years preceding his death he had been unable to work, but was confined to bed only five days. During the latter period his symptoms were, in the order in which they were developed, great prostration, scanty secretion of urine, blindness for twenty-four hours preceding repeated convulsions, loss of speech, and almost total inability to swallow, although consciousness was preserved until coma ushered in death. His temperature (axillary) did not rise above 100.5°. The surface head-temperature nearly equalled that of the axilla. No paralysis of the muscles of the face or extremities. The liver during life did not appear to be enlarged or altered in its outline.

The post-mortem examination revealed, in the brain, engorgement of the veins, with some effusion, slight pia-mater inflammation in the neighborhood of the fissure of Rolando, apparent degenerative changes in the left island of Reil and anterior portion of the left temporo-sphenoidal lobe; in the pleura and lungs, old and numerous pleuritic adhesions, lobular and vesicular emphysema of the lungs, congestion of both lower lobes, and a nodule (probably cancerous) of the left apex; in the heart, fatty degeneration, dilated right ventricle, and incompetent right mitral valves from ossific change; in the liver, multiple cancer, without an increase in size or a nodular condition of the organ; in the spleen, marked increase of fibrous tissue and atrophy of the gland to one-half or less its normal size; in the kidneys and ureters, the last stages of pyo-nephrosis, the glandular tissue being nearly all destroyed; the pelves were as large as a good-sized orange, and the ureters dilated so as to admit a man's thumb; in the bladder, great hypertrophy of the mucous membrane, with decrease of the capacity of the viscus.

Primary carcinoma of pancreas and liver. Presented by Dr. E. T. BRUEN.

The interesting features are the age of the patient (24 years) and the rapidity of the case. These rendered the diagnosis of malignant disease doubtful until the appearance of nodular tumors in the liver. The family history was free from hereditary disease. The disease dated from September, 1881. Death occurred on January 15, 1882. At first the symptoms related solely to the digestive tract, such as a dull, heavy sensation after eating, with acid eructations and occasional vomiting. Subsequently, sharp, cramp-like pains in the abdomen were a prominent symptom. After the lapse of a week there commenced general itching, and two weeks later the skin became yellow. This yellowness and itching never disappeared during the history of the case. At the autopsy the gall-duct was found obstructed by the enlarged head of the pancreas, so that extreme dilatation of the gall-bladder had ensued. This was probably the cause of the jaundice, and not the liver-disease itself. The bowels were regular and the appetite good when first seen. The case then presented evidences of partial obstruction of the gall-duct, with digestive disorder, but without the symptoms characteristic of malignant disease of the stomach or bowels. By the middle of December, 1881, the liver-dulness extended from the fourth interspace to three inches below the ribs in the nipple-line; from the ensiform cartilage the line of dulness extended to within one inch of the umbilicus. The hepatic region was tender on pressure, especially over the epigastrium. The patient complained about this time of dull pain over the liver, with griping pain in the abdomen. The pulse was 76 per minute. He had lost four pounds since admission, and looked thin. About this time a small inequality was noticed on the surface of the liver, three inches above and a little to the inner side of the umbilicus. The spleen was enlarged. By January 7 the bosselation of the liver became distinct, and the enlarged gall-bladder, rendered irregular by gall-stones, presented a slowly increasing, elastic, tender tumor, situated to the right of the epigastrium and umbilicus. By January

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12 the pulse became rapid (130 per minute), the patient rapidly failed, and death occurred January 15.

Autopsy.—The pancreas was enlarged to double its size, the growth chiefly occupying its head and compressing the common bile-duct. Microscopic examination showed it to be scirrhous carcinoma. The liver was thickly studded with nodules of medullary carcinoma, explaining the ante-mortem bosselated feel of the organ. The gall-bladder was distended to twice its normal size, and contained a number of gall-stones.

Remarks.—The duodenal end of the organ, as is usual, was the seat of the disease. In a paper on thirty-nine cases of primary carcinoma of the pancreas, in St. Bartholomew's Hospital Report for 1881, jaundice is stated to have been always present, while in twenty-four cases of secondary carcinoma it was noticed in but seven cases. This is presumably from the secondary growth occurring in some other portion of the organ than its head. Murchison says that the characteristic symptoms of carcinoma of the pancreas are pain in the pancreatic region, sensible tumor, and persistent jaundice. To these Dr. Bruen would add intestinal dyspepsia, which differs in some essential features from the dyspepsia of organic disease of the stomach.

Dr. MUSSER remarked that he could vouch for there being a distinct tumor of the pancreas, as he was present at the autopsy. The case had been under his observation in the dispensary one month prior to admission to the hospital. On account of the age, he was puzzled as to an exact diagnosis, although confident that the cause of the jaundice was obstruction. He noted, among other symptoms, the intense itching of the skin,—a point of importance, Sims says, in the diagnosis of obstructive jaundice from that due to suppression. In five cases of tumor of the pancreas he had lately seen, all were accompanied by jaundice.

Dr. BRUEN called attention to the uncertainty of bosselation as a symptom of malignant disease of the liver. He had presented to this Society, only two weeks since, a liver exemplifying this condition in a marked degree, where nothing beyond cirrhosis in the stage of enlargement existed. The occurrence of carcinoma of the liver at so early an age is unusual, although Dr. Pepper had shown a specimen of the disease to this Society, some years ago, occurring in an infant.

Dr. TYSON said that there were two points in this case of great interest to him: first, jaundice in carcinoma of the pancreas, while it is a frequent symptom, is by no means an invariable one. Seven years ago he presented to this Society the specimens from a case of primary pancreatic carcinoma, where no jaundice had been present, and six months ago he presented to the Society a specimen of enlargement of the head of the pancreas from a patient who also presented no symptoms of jaundice. Secondly, as to the diagnosis from cancer of the stomach, he had noted in his experience, as was mentioned in the history of Dr. Bruen's case, the absence of gastric symptoms. This negative symptom is of importance, since the tumor is often detected in precisely the same spot in both these diseases. The absence of gastric symptoms, with intestinal indigestion, irrespective of fatty diarrhœa, he considered the most reliable diagnostic point between carcinoma of the pancreas and carcinoma of the stomach.

Spindle-celled sarcoma of the small intestine.
Presented by Dr. W. A. EDWARDS.

On September 23, 1882, I was asked to assist Dr. W. F. Atlee in the removal of an abdominal tumor. The patient, æt. 48 years, whose menstruation had ceased at 31 years, first noticed the swelling in April last. On the day of operation she measured thirty-eight inches around the abdomen. The usual incision was made, and the tumor reached, when its surface was seen to be of a dark purple hue, with a net-work of large veins ramifying in every part of its serous covering. A trocar and canula were introduced, but nothing but blood followed the withdrawal of the trocar. The sac was then torn open, and its contents, of a soft brain-like consistence, were emptied out. The growth was now turned out of the abdominal cavity. There was no distinct pedicle, but an attachment to the intestine of about the size of a half-dollar was seen. Dr. Atlee says, "When I emptied the sac of its soft contents, I examined carefully—with *extreme care*—the part fastened to the intestine, and my fingers passed into the intestinal tube." A silk cord was tied around the attached portion, and the remainder of the growth removed. The omentum was attached to the growth for a space of two inches. This was ligated and cut away, and the abdominal wound was closed, etc.

Death occurred September 25, at 4 A.M.

This growth sprang primarily from the submucous tissue of the small intestine, and grew with great rapidity, as the patient was only aware of its presence last April, and by September she measured, as above stated, thirty-eight inches. *Microscopical* examinations of preparations taken from several portions of the growth clearly show it to be a spindle-celled sarcoma, and a most typical one at that. The small intestine is an unusual site for this neoplasm. As far as I am able to ascertain, there is no recorded instance of its occurrence in this situation. My friend Dr. Formad, to whom I have shown the growth, concurs with me in this statement. On the day of operation I noted as well as I could the absence of all secondary deposits. The surrounding intestines and peritoneum were apparently normal, not even unduly hyperæmic. No post-mortem was permitted.

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Chronic parenchymatous nephritis complicating phthisis pulmonalis. Presented by Dr. JAMES TYSON.

My object in showing these kidneys is to illustrate the morbid anatomy of the renal complications which so frequently attend the later stages of phthisis pulmonalis. It is very well understood that when œdema of the feet and legs presents itself in cases of consumption, usually the end is not far distant; but the renal complication which is at the bottom of such œdema is often overlooked. It is, of course, not impossible that there should be œdema in the last stages of phthisis from simple alteration in the composition of the blood (a watery state of it); but in the majority of instances it means that the kidneys have become involved. As to the form of disease affecting the kidneys, it is acknowledged that it may be either lardaceous disease or chronic parenchymatous nephritis; but I think the impression prevails (it was, at least, my own until recently) that the amyloid kidney is the most frequent complication. I believe, however, that the chronic parenchymatous nephritis is more common; and it becomes a matter of interest, if not of importance, to be able to distinguish between these two conditions. It is well known that the microscopic and clinical characters of the urine in these two forms of kidney-disease are often identical, so that no assistance is afforded by a study of the urine. The history of the case, of course, leads to neither particular form, but suggests both. One criterion only can I recall to aid us, and that is the presence of enlarged liver. So commonly associated is the enlarged amyloid liver with amyloid kidney that the absence of it almost necessarily precludes the presence of amyloid kidney. At least, I am sure we would err less frequently if we were to consider all cases of renal disease attending consumption, unattended by enlarged liver, to be parenchymatous nephritis rather than lardaceous disease. It is true we often have enlarged fatty liver in consumption, but the degree of enlargement never reaches that of the amyloid liver; and hereafter I shall be inclined to consider all cases of renal disease complicating consumption to be parenchymatous nephritis, unless they are associated with enlarged liver, when I shall conclude that they are instances of amyloid disease.

Dr. BRUEN considered that the passage of large quantities of urine, and a history of specific disease or of prolonged suppuration preceding the kidney-trouble, would warrant a diagnosis of amyloid renal disease.

Dr. MUSSER would ask whether the heart was hypertrophied, and what was Dr. Tyson's experience regarding hypertrophy of that organ in cases of amyloid disease and of chronic tubal inflammation of the kidneys. If not too late, he would like to call attention to the absence of cardiac hypertrophy, with an infinite degree of obstruction in the renal circulation, in the case Dr. Eskridge had presented. This is in direct opposition to the view held by some that the hypertrophy of the heart is a sequence of the renal obstruction in chronic interstitial nephritis.

Dr. TYSON replied that in this particular instance he did not see the heart, and could not tell whether it was hypertrophied or not. The same law holds good for amyloid kidney as for chronic nephritis: if the case last long enough, hypertrophy is sure to be found sooner or later.

Ecchymoses of the mucous membrane of the stomach. Presented by Dr. J. M. BARTON.

The history of the case was that of chronic lung-trouble. The stomach, upon being opened, presented an irregularly-shaped extravasation of blood about two-thirds of an inch in diameter. The mucous membrane covering the effusion was healthy, as it was in the rest of its extent.

Dr. TYSON remarked that these effusions are not uncommon, but he had never seen them except in their pin-point form.

Dr. ROBERTS asked if there had been violent vomiting recently.

Dr. BARTON replied that nothing of this sort had been observed for some months prior to death.

NEW YORK ACADEMY OF MEDICINE.

NOVEMBER 16, 1882.

FORDYCE BARKER, M.D., LL.D., President, in the chair.

THE scientific paper of the evening was read by Dr. P. L. MORROW, and was entitled "*Excision of Chancre as a Means of Aborting Syphilis.*"

"Is it possible," said the author, "by excision of the initial lesion to destroy the syphilitic virus and prevent the infection of the general system? Such is the question which at the present time is engaging the serious attention of syphilologists both in this country and in Europe." The excision of the chancre was almost the universal practice of the profession until within a comparatively recent date. It then fell into disuse until about 1877, since which time it had been practised somewhat extensively in Germany, less so in France, and scarcely any in England and America. John Hunter, Benjamin Bell, and many others eminent in the profession at that time, believed that the general system became affected with the syphilitic virus secondarily to the local expression of the disease, and that therefore if the chancre were excised sufficiently early the disease would be aborted. If, as was claimed by the opponents of excision, the general system became contaminated immediately after the introduction of the virus, it would be useless to resort to

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local measures for aborting the disease. We were embarrassed, in the study of the subject, by our entire ignorance of the nature of the virus which produced syphilis. It could not be examined by microscopical or chemical tests. Our knowledge of it was altogether limited to its effects upon the organism. Considering the subject from analogy, the author of the paper thought that the mode of action of the poison in the acute exanthemata and in vaccination would probably sustain the view that the constitutional affection took place with the introduction of the syphilitic virus. Experiments on horses, by the introduction of the virus of glanders and cauterization or excision of the part within a few minutes afterwards, lent support to this view. All the animals thus experimented upon took the disease and died. Dr. Morrow read a tabulated list of a number of cases in which excision or cauterization of the initial lesion had been performed by a large number of authors, giving also the number of failures and successes. Out of two hundred and twenty-two cases there were claimed only sixty successes. In drawing these conclusions, however, there were certain possibilities of error. First, a number of the experimenters were unicists, believing in the identity of chancre and chancroid. In the cases of chancroid, which was simply a local disease, as the author believed, of course no constitutional symptoms would manifest themselves, whether or not the local lesion were extirpated. Second, there might be doubts about the diagnosis, for in a number of these cases the lymphatic glands were not affected, and there was absence of signs which many regarded as necessary to establish a positive diagnosis of syphilis. Third, the insufficient observation to which the patient was subjected after the operation. Many of the patients were observed only four or five months,—a period too short to justify the inference of the absence of syphilitic infection. Again, we knew that in many cases the early history of syphilis was very benign, the symptoms perhaps passing unrecognized; but this was no indication that the tertiary symptoms would also prove to be mild. After quoting Ricord's views favoring the extirpation of the initial lesion, and pointing out the liabilities to error in drawing conclusions from his statements, Fournier was quoted to the effect that the initial chancre was the most insignificant of erosions, and when one cauterized what he supposed to be such, he did not know really what he was cauterizing, and he believed, therefore, that to cut away a chancre with the object of preventing infection was purely illusory.

The author referred to the method of excising the initial chancre, of extirpation by the cautery, and also to the practice of some of thorough cleanliness as a substitute for extirpation.

Some of the conclusions reached were—first, that the facts of clinical experience, as well as deductions from analogy and experiments, were opposed to the theory of the local nature of chancre upon which the practice of excision was based. Second, that the practice of excision of chancre as a means of aborting syphilis was condemned by its clinical results when these results are weighed in the balance of a discriminating judgment, due regard being had to the possibility of error. Again, there was no evidence that the excision of chancre modified the constitutional symptoms of syphilis, if they appeared, by making them milder. Nor could the practice, as a means of treating a local sore, be considered in harmony with the principles of sound surgery, since, if left alone, the induration would undergo spontaneous absorption and thus avoid the occurrence of a cicatrix.

DISCUSSION.

Dr. E. L. KEYES said the author of the paper had treated of the subject under consideration so exhaustively, and had so nearly expressed his own views, that it was unnecessary for him to add anything thereto. He did not believe that syphilis at the present time was so severe as it was in the fifteenth century. He read a part of a letter received from a physician who had been a resident of the Sandwich Islands for a number of years, in which it was stated that the population of those islands when the first census was taken, forty years ago, was 110,000, while to-day it was only about 40,000. This rapid falling off in the population was supposed to be due to the effect of syphilis introduced among a virgin people at the time of the discovery of the islands by Captain Cook. At that time the disease was unknown among this people. The custom of the natives was such as to favor a rapid extension of syphilis. It would be considered an insult among them if a man staying all night at a friend's house were not invited to sleep with the wife, nor could a woman refuse any man the liberty of her person without offering him an insult. In those people, however, among whom syphilis had existed for generations, the affection, according to Dr. Keyes's observation, proved to be almost uniformly of a mild type. He did not believe in the efficacy claimed for excision.

Dr. E. B. BRONSON concurred in the views expressed in the paper, and said that he had performed excision of chancre in several cases, but he was unable to draw any definite conclusions as to the value of the practice.

Dr. G. H. FOX could accept the conclusions drawn by the author of the paper in most respects. He had performed excision of chancre in but two cases. In one, the constitutional symptoms did not follow; in the other, they occurred in a mild form. He

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himself was inclined to believe that syphilis was at first a local disease, and theoretically that excision would abort the constitutional symptoms, but he thought statistics showed that practically it did not. It was his opinion that the description of syphilis, as given by the older writers, was that of the severer cases, but that the average case was probably no more severe than the average case of the present day, which, indeed, was comparatively mild.

Dr. F. R. STURGIS heartily concurred in all that Dr. Morrow had read, and mentioned the fact that the absence of adenitis, which was true of many of the cases reported in which the chancre had been excised, cast a strong doubt upon the diagnosis of syphilis. The cases mentioned by the French authors were reported more in detail generally than were those reported by the Germans, and it would be seen that in every case in which the diagnosis of syphilis was further confirmed by the presence of adenitis, the constitutional effects followed excision of the chancre.

Dr. E. D. BULKLEY had excised the chancre in but one case, and in that one constitutional syphilis followed in its severest form. He agreed in general with the conclusions drawn by the author, but it seemed that if in many of the cases reported a chancroid had been removed instead of a chancre, the effect upon the chancroidal lesion was beneficial, and it would be a proper operation to perform, whichever of the two lesions might be present.

Dr. R. W. TAYLOR had performed excision of the initial lesion of syphilis in fifteen cases, and in no case had it aborted the constitutional symptoms. In one case he had definite knowledge of the time of the contraction of the disease. On the twenty-first day after its contraction he washed the initial lesion with carbolized water, applied a little carbolic acid, then dusted it over with calomel, lifted up the chancre and cut it away, together with tissue for a quarter of an inch around it. The wound healed nicely within ten days. The patient had no enlargement of the glands. On the forty-fifth day the roseola broke out. The period of incubation seemed to be prolonged in some cases in which excision of the chancre had been performed, extending even to the seventieth and eightieth day. He believed that when the mercurial treatment was postponed until the second stage the cases did better than if this treatment were adopted earlier.

Dr. F. N. OTIS thought that in order to discuss the subject intelligently we should consider the way in which the syphilitic poison entered the system. He then quoted authors in support of his view that the syphilitic germ, so to speak, entered the system through the lymphatic system, at first exciting a cell-proliferation at the point of the initial lesion, and it stood to reason that if it were practicable to excise this sufficiently early, before the neighboring glands were affected, the disease would be aborted. Whether or not this could be done early enough to abort the constitutional affection, he believed it was justifiable on the ground that it at least removed a large amount of the localized cell-proliferation, that it was often of great personal convenience to the patient, as it prevented the local erosion which might otherwise occur, and also seemed to make the constitutional symptoms, should they follow, milder. In the number of cases in which he had performed the operation, the cicatrix, if there were any produced, was very insignificant.

Dr. MORROW, in closing the discussion, said that while the symptoms of syphilis in the average patient might be comparatively mild, he did not think it could be regarded as a benignant affection when we consider its effects upon the fœtus in utero and upon the new-born infant. It occasions repeated abortions, and is very likely to cause death in children.

REVIEWS AND BOOK NOTICES.

ESSENTIALS OF VACCINATION. A Compilation of Facts relating to Vaccine Inoculation, and its Influence in the Prevention of Smallpox. By W. A. HARDAWAY, M.D., Professor of Diseases of the Skin in the Post-Graduate Faculty of the Missouri Medical College, St. Louis. Chicago, Jansen, McClurg & Co., 1882.

It is always hard to render a thrice-told tale so that it may excite the public interest. The task has, however, been accomplished by the author of this little volume. The easy flowing style renders the book most agreeable reading. It is filled with material of the utmost importance to the layman as well as the physician. We should like to see a copy in the hands of each member of the several boards of health of our different cities.

The history of vaccination, variola in animals and its nature, the symptoms and course of vaccinia in the human subject, are discussed. Revaccination is recommended at least once in five years, or after a few months under danger of infection it is important to make a trial of the operation. Bovine virus, stored under suitable supervision, is recommended in preference to long-humanized virus or human virus, unless it can be obtained from undoubtedly healthy subjects. The importance of obtaining the pure lymph for purposes of vaccination is insisted upon, and the old saw "What is worth doing at all is worth doing well" is the text for the chapter on the operation itself. The protection afforded by vaccination is illustrated in the

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closing chapter. We select one instance: "In the Franco-Prussian war, smallpox prevailed to an alarming extent, both armies being exposed to the contagion. The German mortality was only 263 men, while the French loss was 23,468, although the latter army was at no time more than half the size of the former. The safety of the German host lies in the fact that in no country is vaccination carried on with greater care than in Germany." (P. 128.)

E. T. B.

THE SURGERY OF THE RECTUM. By HENRY SMITH, F.R.C.S. Fifth Edition. London, J. & A. Churchill, 1882.

This book has been long and favorably known to the profession. The teachings of the author are sound, his experience large, his language clear and concise. With successive editions he has added new evidence concerning his favorite operation for internal hemorrhoids,—that by the serrated clamp and actual cautery,—until, in spite of serious opposition, it has now become a recognized surgical procedure, and may fairly be said to contest with the ligature the claim to pre-eminence. In this country, however, and, we believe, also abroad, the latter operation is the one generally preferred, though in exceptional cases, especially where there are local complications, such as œdema and induration of the tissues at the margin of the anus, coincident prolapsus of the rectum, etc., Mr. Smith's operation is often employed. For the latter affection—prolapsus recti—it seems in his hands to have been so successful as to warrant the assertion that, when operative treatment is required, it should almost invariably be adopted.

His remarks upon the diagnosis and treatment of fistula and of fissure are so practical and so instructive that we are led to regret that so much of the book—nearly one-half—is given up to the consideration of his treatment of piles. The illustrative cases at least—useful enough when his method was new and on trial—might now with advantage be omitted. We observe that the doubtful cases of so-called gonorrhœa of the rectum which appeared in some of the writings on the subject have, very properly, not even been alluded to by the author. The evidence in their favor was never such as to warrant their introduction in a scientific work.

For consultation by the general practitioner, we would prefer the treatises of Van Buren or Allingham; but, in addition to these, it would often be of great advantage to consult this excellent book.

URETHRITIS CAUSED BY FROGS.—Dr. Bonarny, in a recent thesis (*Rev. de Thérapeut.*, No. 19), describes two epidemics of urethritis among soldiers in Africa, caused by eating frogs which had fed upon cantharides.

GLEANINGS FROM EXCHANGES.

COMBINED POISONING WITH OPIUM AND STRYCHNIA.—A letter to the London *Lancet* (October 28) describes a case in which suicide was attempted by a young woman, who took part of a powder of Battle's Vermin-Killer, containing strychnia, of which she must have received about one and one-half grains, and, immediately afterwards, two ounces of laudanum. Nearly four hours later, she was found suffering with marked evidences of opium narcosis. Sulphate of zinc produced prompt emesis; her stomach was well washed out with hot water, mustard-water, and coffee; she was diligently walked up and down, and three hours later was found by the attendant to be improving rapidly, so that it was believed to be impossible that the strychnia had also been taken. Indeed, the only difference noticed between this case and ordinary cases of opium-poisoning consisted in the fact that the pupils were little if at all contracted. One hour later, or eight hours after taking the combined poisons, she had slight convulsive movements of the extremities, which were at first thought to be hysterical, but they gradually increased in violence and frequency until their character was unmistakable. The opium symptoms had now nearly completely disappeared. Half-drachm doses of chloral, given every hour, controlled the paroxysms, and in ten hours later (making eighteen from the time of taking the drugs) she had entirely recovered.

It is worthy of note in this case that the symptoms of strychnia-poisoning were held completely in check for eight hours by the laudanum, and that recovery took place after the unusually large dose of one and one-half grains of strychnia had been swallowed, although the chloral treatment was not instituted until at least nine hours after taking the poison.

THE EFFECTS OF OZONE UPON THE BLOOD.—The inhalation of ozonized air, according to some recent experiments of Prof. Binz, of Bonn, has effects resembling those of nitrous oxide, but it is irritating to the air-passages: in those who can take a full inspiration it gives rise to an agreeable sense of stimulation, followed by drowsiness. In studying the effect upon blood, it was found to have much less influence than had been supposed by physiologists, who claimed that it exerted an injurious effect upon the globulin, by converting it into methæmoglobin, the ozone itself entering into the reaction and becoming destroyed. Binz found that this was only true in part: the decomposition of ozone by the blood is not complete; considerable traces remain in an unaltered state. The ozone manifestly first combines with the dissolved organic elements, and only attacks the formed elements after prolonged action.

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Upon defibrinated and fresh blood a current of ozonized air had very little effect, coagulation was slow, the alkalinity was slightly increased, the blood gradually becoming darker, resembling reduced blood, except that it did not regain its red color on agitation with air. A solution of pure oxyhæmoglobin resisted the action of the ozone much less actively than did the blood, although it never presented alterations in less than ten minutes.—*Lancet.*

MISCELLANY.

A WORTHY MEMORIAL.—At Cambridge, recently, a number of eminent members of Cambridge and Oxford, and others, held a meeting and decided to raise a fund, to be called the "Balfour Fund," for the promotion of research in biology, and especially animal morphology, in memory of the late Professor Francis Maitland Balfour. The Balfour family have given £3000 to the fund, and Dr. Michael Foster has added a legacy of £1000 left by Professor Balfour to be expended in promoting the study of biology.

SIR THOMAS WATSON, now in his ninety-first year, was seized, while at lunch on October 22, we learn with deep regret, with a paresis of the left side, attributed by Dr. Geo. Johnson to arterial obstruction by thrombosis in the neighborhood of the right corpus striatum. There was not much loss of power, and he remained in full possession of his mental faculties; but his remark that "This is the beginning of the end" appears to be only too well founded.

THE first of a course of lectures on the "Physical Exploration of the Lungs by Means of Auscultation and Percussion," before the County Medical Society of this city, was delivered before a large and appreciative audience, on November 25, at the College of Physicians. The subject of the first lecture was "The True Mode of Study and its Requirements as regards Auscultation and Percussion; the Signs obtained by Percussion." The next lecture will be given December 16, on "Auscultation and the Respiratory Murmur, with its Abnormal Modifications." The final lecture, on "The Rales and Vocal Signs," will not be delivered until January 13, 1883. The profession has a general invitation to attend these lectures.

A PROSPECTIVE POLYCLINIC IN PHILADELPHIA.—Among recent improvements made at the German Hospital of Philadelphia, which has been considerably enlarged during the present year, is a clinical amphitheatre, for the purpose of utilizing the valuable medical and surgical material of this first-class hospital for medical instruction. This adds another opportunity and inducement to the advantages already offered to medical students to select this city for obtaining a medical education, where both hospitals and clinical material are abundant.

KOUMYSS is used in Russia for indigestion and diarrhœa in infants, given in teaspoonful doses frequently repeated.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY FROM NOVEMBER 14 TO NOVEMBER 28, 1882.

MCKEE, JAMES C., MAJOR AND SURGEON.—Now awaiting orders, is assigned to duty in the Department of California. S. O., Paragraph 10, No. 273, A. G. O., November 23, 1882.

BILL, JOSEPH H., MAJOR AND SURGEON.—At expiration of present leave to report to the Commanding General, Department of the Platte, for assignment to duty. S. O., Paragraph 10, No. 273, A. G. O., November 23, 1882.

ALDEN, CHARLES H., MAJOR AND SURGEON.—At expiration of present leave to report to the Commanding General, Department of Dakota, for assignment to duty. S. O., Paragraph 10, No. 273, A. G. O., November 23, 1882.

CLEARY, PETER J. A., CAPTAIN AND ASSISTANT-SURGEON.—Now awaiting orders; will report to the Commanding General, Department of Dakota, for assignment to duty. S. O., Paragraph 10, No. 273, A. G. O., November 23, 1882.

MUNDAY, BENJAMIN, FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Will be relieved from duty at Willet's Point, New York, and assigned to duty in the Department of the Columbia. S. O., Paragraph 10, No. 273, A. G. O., November 23, 1882.

BARNETT, RICHARDS, CAPTAIN AND ASSISTANT-SURGEON.—The leave of absence granted November 1, 1882, is extended five months. S. O., Paragraph 11, No. 273, A. G. O., November 23, 1882.

BROWN, PAUL R., ASSISTANT-SURGEON.—The leave of absence granted May 25, 1882, is extended six months on surgeon's certificate of disability. S. O., Paragraph 7, No. 273, A. G. O., November 23, 1882.

CORSON, JOSEPH K., ASSISTANT-SURGEON.—Is assigned to duty at Jefferson Barrack, Mo. S. O., Paragraph 8, No. 273, A. G. O., November 23, 1882.

SMITH, ANDREW K., MAJOR AND SURGEON.—At the expiration of his present sick leave will be assigned to duty at Willet's Point, New York. S. O. Paragraph 10, No. 273, A. G. O., November 23, 1882.

GARDNER, EDWIN F., CAPTAIN AND ASSISTANT-SURGEON.—Ordered to Fort Walla-Walla for duty. S. O. 161, Paragraph 3, Department of the Columbia, October 26, 1882.

MOORE, JOHN, SURGEON.—The leave of absence granted by S. O. 145, c. s., Department of Colorado, extended one month. S. O. 175, Paragraph 2, Military Division of the Pacific, November 3, 1882.

OWEN, WM. O., JR., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—To proceed to Astoria, Oregon, and report to First-Lieutenant E. B Rheem, Twenty First Infantry, for duty with his command. S. O. 164, Paragraph 5, Department of the Columbia, October 30, 1882.

WILLIAMS, JOHN W., MAJOR AND SURGEON.—Assigned to duty at Fort Cœur d'Alène, Idaho. S. O. 161, Paragraph 3, Department of the Columbia, October 26, 1882.

REED, WALTER, CAPTAIN AND ASSISTANT-SURGEON.—Relieved from duty in the Department of the East, and assigned to duty in the Department of the Platte. S. O. 266, Paragraph 4, A. G. O., November 14, 1882.

WYETH, M. C., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—To report to Fort Snelling, Minn., for temporory duty. S. O. 185, Paragraph 3, Department of Dakota, November 9, 1882.

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PHILADELPHIA, DECEMBER 16, 1882.

ORIGINAL LECTURES.

CLINICAL LECTURE

ON EPILEPTIFORM CONVULSIONS FOLLOWING INJURY TO THE SKULL.

Delivered at the University Hospital, September 23, 1882,

BY WILLIAM PEPPER, M.D.,

Professor of Clinical Medicine in the University of Pennsylvania.

Reported by WILLIAM H. MORRISON.

GENTLEMEN,—I bring before you this man, who is himself a physician of long experience, to consider his case for your instruction. I shall not go into the history in detail, but will refer only to the salient points.

He is 50 years of age, of good family stock, free from constitutional taint of all kinds. At the age of fifteen he was kicked above the eye by a horse, and knocked senseless. He remained unconscious for several days. It was supposed that the brain was injured, but, living in an out-of-the-way place, no medical attendance was obtained. The wound of the head was long in healing. It is clear that the external plate of the skull had been fractured, as fragments of bone were discharged through the wound. He, at the time of the injury, had just entered on his second year at college. He was able to return to college for a short time the next year, but found that study gave rise to such distress in the head that he was obliged to give it up; but the following year he succeeded in getting through very respectably. He then began the study of medicine, and got along very well until one week before graduation, when, without any previous suffering or warning, a convulsion occurred at night while he was asleep. Seven years elapsed between the injury and the first convulsion. He returned to his home, opened an office, and began the practice of medicine. He soon had another convulsion, and they then averaged about one a week, always coming on during sleep, leaving him stupid the next day, with aching in the bones, and muscular soreness remaining for a couple of days. There was at this time no pain about the wound, and surgeons whom he consulted advised against an operation, saying that they did not think the spasms were the result of the injury. He, however, felt that the injury was the cause of the trouble, and finally persuaded a friend to operate. The operation was performed with the ordinary round trephine, the centre of the instrument being placed almost vertically above the pupil of the right eye and three-fourths of an inch from the middle of the eyebrow. A piece of bone was removed, in the centre of which was found a spicule of bone, from one-fourth to one-third of an inch in length, growing from the internal plate. There had not been a depressed fracture. He soon recovered from the operation, and it was six months before another spasm occurred. He then gave up the practice of medicine, and went into business.

From 1857 to 1861 he had occasional attacks, but these gradually became milder and returned at longer intervals. Between 1861 and 1876 he did not have a single attack. It is therefore clear that the operation exerted a powerful beneficial effect. It is also to be noted that he at the same time changed his habits of life, going into business, and in 1861 entering the army as assistant-surgeon. This change of habits may have had something to do in preventing the recurrence of the spasms. In the winter of 1862 and 1863 he had an attack of typhoid fever, from which he feels that he never fully recovered. Since that time there have been occasional attacks of diarrhœa. He again opened an office, and entered into full practice. In 1865 he had several hemorrhages, but under a stimulating plan of treatment they passed off. He, however, continued the use of whiskey, and in one year gained in weight from one hundred and fifteen to one hundred and sixty-five pounds. The use of the stimulus, taking it perhaps more freely than was desirable, brought on dyspepsia, which gradually grew worse. In 1876, directly after a spell of cloudy, rainy weather, another convulsion occurred,—the first for fifteen years. This took place in the afternoon while he was asleep. In a month he had another attack. He then gave up business, and since then has not been regularly employed. He has used the various bromides in enormous doses, and, although he has suffered from bromism, yet the attacks have gradually increased in frequency, although not in violence, from that time. He has had many partial attacks,—*i.e.*, light at-

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tacks,—from which he soon rallies, but many have been fully developed. Sometimes a month elapses between the spells, and on one occasion the period was three months. Stimulants were abandoned as much as possible after the attack in 1876. Occasional doses have, however, been taken to relieve the depression of spirits. The bromides have often been combined with hyoscyamus to produce sleep.

For some years he has had aches and pains throughout the body. These are particularly bad in damp, rainy weather, and it has been noticed that in such weather the convulsions are more frequent, and the sleeplessness, the disorder of digestion, the depression of spirits, the restlessness, and the aching of the body more marked.

The convulsions have been fully-developed epileptic attacks coming on without warning, and, indeed, he frequently feels unusually bright before the seizure. The attacks always come on at night. There is no aura to guide us to the spot from which the irritation might originate. Recently his sufferings have been so great that he has resorted to chloral to secure sleep. This has been the case especially during the past month or two. The chloral has been occasionally combined with morphia.

We have plainly before us in this case these facts: first, it is a case of epilepsy; second, this has not been the result of any inherent or any congenital tendency to the disease, but it has unquestionably been acquired from traumatism.

A traumatic cause may produce epilepsy in two ways. In the first place, it may simply produce such a shock to the general system that it throws the patient into a susceptible condition of nerve, and thus develops a latent tendency which otherwise would not have expressed itself. In such a case there is no direct injury to the nervous system, nor is there any local irritation which excites convulsions by reflex action, but merely the depressing effects of nervous shock. More commonly, however, the way in which a traumatic cause excites epilepsy is such as we see in this case, where it gives rise to one of two things,—either a direct injury to the brain or spinal cord, exciting such irritation as to produce a convulsive explosion, or the injury implicates the nerves, causing such intense peripheral irritation that by reflex action convulsions are excited. In this patient we have the direct traumatic effect upon the brain.

Many cases are met with in which injury to the skull is followed by convulsions. Sometimes it is difficult to decide whether the injury has been serious enough to cause the spasms which have followed. This is particularly the case with little children. A child may fall, striking its head severely. No fracture can be discovered. Some time after, perhaps while the child is teething, it has a convulsion. It is then difficult to decide whether the spasm has resulted from the local injury or whether the child would have had the spasm if the accident had not happened.

Although in this case a fracture was clearly proved, yet when he consulted two distinguished surgeons they both said that they thought that there had been no injury to the brain, and would not operate. In my experience, where a convulsion occurs in a person who has no hereditary tendency to epilepsy, and who has received an injury to the head, there is very often a connection between the injury and the convulsion; and I always suspect that there is such a connection, instead of doubting its existence. Especially would I have suspected this in a case like the present, where there was so much local injury, with such clear evidence of the bone being involved, and where the injury occurred at the age of fifteen, before which age any tendency to convulsions would have been apt to show itself.

In this patient seven years elapsed before the occurrence of the spasms. What are we to conclude in regard to this fact? It would be natural to suppose that, if the injury produced a depressed fracture of the skull, driving a spicule of bone into the brain and exciting irritation, convulsions would come on soon after the injury. We not rarely find, after such an injury, that spasms appear within a few months.

But suppose, on the other hand, that the injury did not produce a depressed fracture and did not drive a spicule of bone into the brain, but simply set on foot a local meningitis which kept on producing thickening until it gave rise to an exostosis one-third of an inch long, pressing on and irritating the surface of the brain: it is perfectly clear that there is no limit to the time which may be required for the bony growth to reach a sufficient size to cause irritation of the brain. Many years may

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elapse between the reception of the injury and the occurrence of convulsions.

An interesting case presented itself to me this spring, also in the person of a physician practising in one of the northern counties of this State. He was a vigorous man of 35, without the slightest tendency to convulsive disease or to nervous trouble of any kind. He was sober in his habits, and free from any venereal taint. Several years ago he was thrown from his buggy, and struck his head against a tree, breaking in the frontal bone, causing a deep depression over the right orbit. There was no wound of the soft parts, and no exfoliation of the bone occurred. If I am not mistaken, some twelve or thirteen years elapsed between the injury and the first convulsion, which was violent in character. From that time the convulsions occurred very frequently. I have no doubt that in this case there had been, in addition, possibly, to a little depression, a slow process of thickening of the bone, adhesion and thickening of the membranes, and gradual pressure on the surface of the brain, until it reached a point at which the irritation was sufficient to excite a convulsive explosion.

I therefore do not think that the length of the interval is to be regarded as showing that there is no connection between the injury and the spasms which follow.

In our patient the disease is not true epilepsy, but it is a case of epileptiform convulsions. We define true epilepsy to be an inherent condition of the nervous system, in which convulsions occur without manifest external cause. Where convulsions result from local causes and resemble those of epilepsy, we speak of them as epileptiform convulsions. Practically speaking, there is a great difference between true epilepsy and epileptiform convulsions. There is a great difference in the prognosis, which is much better in epileptiform convulsions, where we can get at the cause and remove it, than it is in essential epilepsy.

I heartily endorse the operation which was performed in this case. We cannot fail to see that it was followed by decided and continued benefit for nearly twenty years. But at the end of this period, in 1876, the fits reappeared, and from that time they have been gradually increasing in frequency, varying in severity and attended with grave general symptoms, distressing pain, disturbance of digestion, marked depression of spirits, failure of memory, loss of energy, and such general deterioration of the whole nervous system that the least excitement, worry, or mental effort suffices to bring on an attack.

Let us carefully consider what has been the cause of the return of the convulsions, what are the elements that go to keep up these convulsions, and how we shall modify the treatment in order to afford relief.

The first questions that would naturally occur are, Could not some fresh process of inflammation have taken place, with the formation of another exostosis? And would it not be advisable again to trephine the bone to the outer or inner side of the seat of the former operation? It is not impossible that another exostosis has formed. You note that there has been no pain in the head; but its absence does not prove that no slow inflammatory thickening has occurred. If there had been a fixed pain at the seat of injury during the past six years, I should, without a moment's hesitation, advise trephining; but when we reflect that there has been no such pain, that there has been no renewed injury to excite fresh inflammation, and that the convulsions came on while he was in the habit of taking stimulants in such large quantities that the digestion had become disordered, producing a tendency to diarrhœa, I consider an operation unjustifiable, particularly when we bear in mind that we have nothing to guide us to the spot at which the trephine should be applied.

Let me call attention to the ways of removing such irritation without the use of the trephine. There are other means which are effective. The best of these I consider to be the use of the actual cautery applied over the surface of the cranium. This causes so intense an impression that even at the depth of the membranes of the brain it unquestionably produces a powerful derivative action. I have found in numerous cases of epileptiform convulsions following injury, following sunstroke, following local meningitis, however produced, that the repeated action of the actual cautery was productive of the most remarkable results. I propose to use the actual cautery in this case, making a deep burn with Paquelin's cautery over the right mastoid process.

Again, you will observe that a man who has received such a severe shock to his

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nervous system, and who has fallen into the habit of having epileptiform convulsions, is in a state of unstable equilibrium, in which any disorder of general health may, by reflex irritation, suffice to cause the attacks. The point from which this reflex irritation is most commonly exerted is the gastro-intestinal mucous membrane. This is a familiar observation in all cases of epilepsy. There are few epileptics who cannot bring on a spasm by eating indigestible food. Even in essential epilepsy there is no part of the treatment that is of greater importance than the dietetic.

You will remember that our patient, in order to overcome the tendency to hemorrhages and the breaking down of his general health, was advised to use stimulants. He began to use them freely, and, using them too freely, set on foot an irritation of the digestive canal, which still continues. I attach the greatest importance to this disorder of the stomach and bowels as perhaps being the real cause of the reappearance of the spasmodic attacks.

Before speaking of the treatment of the digestive troubles, I shall call your attention to the treatment to which this man has been subjected. As soon as the convulsions returned, the bromides were resorted to, at first in small doses, and, as these failed, larger doses were taken. As one bromide failed, another was substituted. The doses were increased until finally they became heroic. The bromides losing their effect, he becomes weaker, and his whole system is disturbed by the excessive doses of the bromide. Another sedative is substituted. Large doses of hyoscyamus are taken. They lose their effect, and more is added. The digestion becomes disturbed, and occasionally there is diarrhœa. Morphia is tried, at first in small and then in large doses. This loses its effect, and chloral is tried. When he came to the city, three or four days ago, he had been taking in a night from sixty to ninety grains of bromide, thirty to forty grains of chloral, three or four teaspoonfuls of tincture of hyoscyamus, one-half grain or more of morphia, and yet getting very little sleep. Of course he felt wretched and miserable the next day.

If in any case you have reason to suspect that irritation of the mucous membrane of the stomach and bowels gives rise to the convulsions, it is absolutely necessary that the irritation should be removed, no matter what interference it may cause for the time being with other therapeutic treatment. In this case the bromides and other sedatives have lost their effect, and there is no use in continuing them. My own opinion is that they should be stopped as far as possible, or, if they are not stopped, that only those that can be well borne by the stomach should be given, or else they should be given by the rectum.

I should propose to place our patient on an almost exclusive diet of skim-milk, allowing simple kinds of farinaceous food morning and evening and soft-boiled eggs at dinner. Thus, in the morning before rising, a glass of hot water and milk (equal quantities),—cambric tea; for breakfast take a dish of fine hominy grits with milk; at ten o'clock, another glass of milk and hot water; at twelve o'clock, a little meat or a soft-boiled egg, with bread; at three o'clock, a glass of milk and hot water; at five o'clock, grits, with milk; at half-past seven o'clock, milk and hot water. It is not likely that the milk given in this way will sour on his stomach, particularly if we give remedies to relieve the irritation of the mucous membranes.

This is one of that class of cases in which nitrate of silver has earned its reputation as a cure for epilepsy. In the ordinary cases of epilepsy I do not see what good nitrate of silver can do; but in cases of spasms, where these are excited by irritation of the gastro-intestinal canal, I can easily understand how positive benefit may arise from the use of nitrate of silver. I have found it of great service in such cases. You are probably aware that the people at large regard nitrate of silver as one of the most valuable remedies in epilepsy; and if an epileptic gets hold of a prescription containing nitrate of silver, the probabilities are that he will not stop taking it until he is as blue as an indigo-bag.

After placing this man on the diet that I have indicated, I should give the following:

℞ Argenti nitratis, gr. ¼;
Extracti opii, gr. $\frac{1}{12}$.
Ft. pil. no. 1.
Sig.—To be taken four times a day.

Suppose that after the withdrawal of the bromides the convulsions would seem to increase in frequency, it would then be necessary to resort to them again, selecting such a bromide and such a method of administration as would least irritate the stomach.

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I should give the bromide of sodium, which I consider to be the least irritant to the stomach of all the bromide combinations, either alone or associated with the bromide of potassium. I should give it in moderate doses only.

When he came to me a few days ago, I cut off all the sedatives that he had been taking, and gave him simply assafœtida and quinine by suppository, and watched his diet carefully, intending to make the change which I have to-day proposed. Since then he has felt better. Yesterday it was exceedingly stormy, and I expected to find him very much depressed, but, on the contrary, he felt better than he had for a long time. Last night he had a marked convulsion, and this morning he has the depression and aching which follow a fully-developed attack. That convulsion has done him no harm. I shall carry out the treatment which I have proposed, continuing the use of the assafœtida and quinine. I should like to continue this line of treatment for a month or six weeks. I have seen it successful in so many cases of a similar character that I am hopeful that a persistence in it will restore this man to health.

ORIGINAL COMMUNICATIONS.

THE TREATMENT OF POST-PARTUM HEMORRHAGE.

Read before the Philadelphia County Medical Society, November 8, 1882,

BY W. H. PARISH, M.D.

HAVING been requested by the directors of this Society to discuss in a paper the treatment of post-partum hemorrhage, it would be inappropriate to attempt a consideration of the general subject, hemorrhage after labor. In fact, the proper limit of a paper to be read before the Society, and to be discussed by it, does not admit of such a consideration *in extenso*. Yet, in order rationally to weigh the various methods of management of this sometimes fatal and always important accident, it will be necessary briefly to recall some of the salient conclusions bearing directly on the indications in treatment.

The term as used in the title of this paper has been generally understood to indicate an unusual loss of blood, during or subsequent to the after-birth period, from those uterine vessels which have orifices in the placental site. I, however, deem it best to make the term embrace any unusual bleeding from the genitalia occurring soon after the delivery of the fœtus.

With such an understanding as to the signification of the term post-partum hemorrhage, we recognize all such bleeding, with rare exceptions, to be either from the placental site or from a laceration of some portion of the genital canal. Hemorrhage coming from the placental site is associated with either a partial or a complete detachment of the placenta. The after-birth may be in the uterus, or it may have been expelled, or a portion may be remaining and adherent and the rest have been extracted. During such hemorrhage the uterus is in an imperfect state both of contraction and of retraction. This condition of the womb may be dependent upon an atony of its muscular fibres that is independent of influence exerted upon the uterus by its contents; an atony that prevents its sufficient contraction and retraction even if entirely empty; an atony dependent upon a variety of causes which the scope of this paper does not permit me to investigate. It is essential, however, to bear in mind that such an atony does at times exist.

Again, the presence of any substance in the uterus after the birth of the child may act mechanically, and in some other not well-understood manner, in preventing condensation of the womb sufficient to close the calibres of those vessels which are torn off in a partial or a complete separation of the placenta. In this way blood-clots, especially if somewhat firm, intra-uterine tumors, the placenta or any portion of it or of membranes, may bring about bleeding. In the case of tumor, and especially of a partially-attached placenta, not only is an influence exerted similar in nature to that exerted by other intra-uterine substances, but these structures further act as splints over the surfaces of their attachment to prevent contraction of muscular fibres in that special portion of the womb, and a localized inaction or paralysis is produced. Moreover, while attached they determine a flow of blood into the vessels of that special uterine area.

But an atony not dependent upon the existence of some substance in the uterus is itself productive of retention of placenta, clots, membrane, etc. It is also apt to be

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associated with adhesion of the placenta; for the cause of this adhesion may have been operative also as a cause of uterine inertia. The presence of a tumor is also liable to have engendered atrophy of some portion of the uterine walls. Thus, then, do we often find an atony that in its origin antedates labor associated after the delivery of the fœtus with some intra-uterine condition itself hemorrhage-producing.

I desire to emphasize the fact that hemorrhage from the placental site has as its one invariable cause insufficient uterine contraction and retraction. This insufficient contraction and insufficient retraction are dependent upon uterine inertia, whether this inertia is independent of or dependent upon some intra-uterine condition, and whether the uterus is empty or contains such substances as placenta, membranes, clots, tumors, etc. Hemorrhage from the placental site is due to insufficient shortening of uterine muscular fibres, to insufficient uterine condensation, to insufficient compression through this condensation of the uterine vessels leading to the placental site. Hemorrhage from the placental site means an insufficiently contracted and an insufficiently retracted uterus.

Bring about sufficient uterine condensation, and we secure that physiological compression of the bleeding vessels by which nature when undisturbed limits the loss of blood to physiological requirements. Place, then, the uterus in a condition favorable to condensation, and secure promptly this condensation. Empty the uterus of its contents, and make it contract and retract. Such are the two indications, and under all ordinary circumstances these two measures must be instituted quite simultaneously. To empty the uterus without assuring its condensation might prove fatal; to attempt to obtain condensation, and at the same time to leave within the uterus portions of after-birth, membranes, clots, etc., would prove futile, and possibly fatal.

The immediate removal of an intra-uterine tumor, productive of post-partum hemorrhage, must depend upon the extent to which the tumor is attached to the uterine wall. If not too intimately connected, its immediate removal with wire écraseur, or with scissors, after ligation of its pedicle, is indicated. If it cannot be promptly and with comparative safety removed, condensation of the uterine walls about it must be attempted.

The influence of thrombi in controlling bleeding from the placental area is too unreliable to merit our confidence. In lowered conditions of the system, as in exhaustion from hemorrhage, or in shock, they may act temporarily in checking the bleeding; but when the force of the circulation is somewhat regained, the thrombi are apt to be washed out and bleeding to recur, unless a firm retracted state of the womb has been in the mean time secured. Moreover, such thrombi are fruitful sources of septic infection; for they are very prone to undergo septic decomposition. In the relaxed state of the womb which accompanies their existence, atmospheric air is accessible to them, and they are also in contact with lochia, likely itself to become septic in character. Thrombi thus circumstanced are in one sense only slightly and most uncertainly conservative, and in another sense most certainly and greatly dangerous. The very existence of thrombi in the exposed vessels at the placental area seems to me pathological, and assiduously to be avoided. It is only as a *dernier ressort* that we should ever employ those remedial measures which control hemorrhage by producing coagula in the vessels of the placental area. In order to prevent hemorrhage from these vessels, nature, when acting with normal efficiency, does not plug them with fibrinous masses, but she obliterates their calibre by the compressing action of uterine retraction. She does not keep the walls of these vessels apart by blood-clots, fragments of which may escape into the circulation and become emboli, probably septic emboli, in more or less remote parts of the economy, or which, after conversion into sepsin, and being beyond the reach of detergent and antiseptic syringing, are certain to infect dangerously the entire system. *It is through uterine condensation, then, and not through the production of thrombi, that we must control hemorrhage from the placental area.*

Hemorrhage from a laceration of the cervix, vagina, perineum, or vulva is, of course, not dependent upon uterine inertia. The state of the uterus bears no relation to the occurrence or continuance of bleeding from a tear of the vagina or of the external genitals. Hemorrhage from a tear of the cervix is comparatively greater if the uterine body is relaxed, but it will at times continue excessive during decided uterine

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condensation. The uterine globe may be felt as of cannon-ball hardness, and yet active bleeding continue from the cervix. Retraction of the uterine body may diminish a hemorrhage from the cervix, but it is not efficient in actually stopping, and not always in materially lessening, the bleeding. Loss of blood from the uterine body will be effectually controlled by retraction of the uterus, but a tear of the neck or of any portion of the genital canal other than the uterine body will bleed, subject to the same influences as those which determine the extent of hemorrhage from a tear in other portions of the system. Such bleeding is, however, apt to be excessive. The entire genital apparatus and contiguous structure are greatly increased in vascularity during pregnancy, the blood-vessels become larger,—may become varicose or aneurismal,—and some of them, as those of the cervix, are devoid of valves, while other vessels are markedly erectile in character, as is most especially the case with those in the bulbs of the vestibule.

Usually bleeding from a laceration is less profuse, less immediately threatening to life, than if it proceeds from patulous utero-placental vessels; but it may nevertheless be very active, especially in varix or in aneurism of the vessels of the lacerated portion, or if the bulbs are torn. Although such hemorrhage usually is less profuse, it may continue for hours, or, by repeated detachment of thrombi, recur at short intervals for days. The aggregate of blood thus lost becomes very great. The magnitude of the detriment to result to the patient must not be estimated entirely by the immediate magnitude of the flow. Any considerable loss of blood from a laceration may lead to secondary hemorrhage from the placental area by inducing relaxation of the uterine fibres, and, further, it may endanger life by gradual exhaustion, or, through lowering the vital powers, encourage the formation of sloughs, and also render the system incapable of resisting the inroads of septic poison. Again, should such a patient escape death from cerebral anæmia, septicæmia, and inflammation, the future still holds in store for her all the ills incident to subinvolution of the genital organs and surrounding tissues. Hemorrhage from a laceration, then, should not be overlooked, nor should its treatment be neglected.

Hemorrhage from the placental area and that from a laceration may coexist. A too rapid labor or a too greatly protracted labor is liable to cause uterine inertia, and also to produce a laceration of the soft parts. If bleeding is progressing, and the uterine body is relaxed and flabby, it is quite certain that the bleeding is largely, at least, from the severed utero-placental vessels; but blood may at the same time be escaping from a laceration of the cervix. During such an active hemorrhage there is no time to spare for the elimination of a coexisting loss from such a laceration. There is not time for making even a casual examination for such a purpose; and to determine the condition of the cervical and vaginal tissues after labor, a careful and necessarily somewhat protracted examination is required. The deduction is apparent,—viz., that in endeavoring to check a bleeding from the placental area our remedial measures should not be of a kind calculated to increase a bleeding from a laceration, but that greatly to be preferred are those measures capable of controlling either or both forms of hemorrhage.

I have already stated that excessive bleeding may continue from a laceration after the uterine body has been brought into a state of complete retraction, and hence it is clear that our remedial measures should not be limited to that class capable only of securing uterine condensation; for such measures cannot control a bleeding from a possibly, or even probably, coexisting laceration.

After loss of blood the system by reason of increased activity of the absorbents receives septic poison rapidly into itself, and by reason of its enfeebled condition passes quickly, and to a dangerous extent, under the influence of this poison. Our remedial measures, then, should not be of a character to increase to the slightest extent the liability to septic infection.

As is well recognized, traumatic injuries, such as contusions and lacerations, are, in puerperal women suffering from great loss of blood, exceedingly prone to inflammation of an erysipelatous or other adynamic type: hence our remedial measures should not be of such an irritant nature as to increase in the slightest degree the tendency to inflammatory action. Our remedies for post-partum hemorrhage must be of such promptness as to ward off danger immediately threatening, they should be certain

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in their action, and, if possible, fraught with no harm, immediate or remote, to the patient. A maximum of promptness and certainty combined with a minimum of noxiousness to the patient must be aimed at in the choice of treatment for post-partum bleeding.

In the light of the various considerations which I have endeavored to present, let us now proceed to analyze, and to endorse or to reject, the more prominent of the numerous agents and measures at present in vogue.

To attempt a consideration of the prevention of post-partum hemorrhage would carry me over the entire management of labor; for its causes may antedate delivery for hours, or may antedate labor itself. However, immediately after the escape of the fœtus the hand should be placed on the abdominal wall over the uterus, and by moderate pressure its retraction be insured about the still-remaining but probably partially-detached placenta. If there is as yet no unusual bleeding, the after-birth should be allowed to remain for ten to fifteen minutes; but if there should be too profuse a loss of blood, and the absence of sufficient retraction should suggest the loss to come from the placental area, the uterus should be made further to retract by compression of it with the hand over the abdomen, and if the hemorrhage does not promptly stop, the placenta should be immediately expressed by Crédé's method, and the uterus should be brought into a further state of retraction by the hand externally compressing it. If there is reason to believe that the bleeding is almost entirely from a torn cervix,—and this conclusion may be arrived at by eliminating, through inspection, a perineal, vulvar, or lower vaginal tear, and by observing a womb retracted about the placenta,—it is still best practice to express the placenta if the bleeding is considerable; otherwise, in the effort to control such bleeding the hand and the attention of the physician will be taken from the uterine body, and its relaxation may take place, with an establishment of a bleeding from the placental area. The same rule in reference to the expression of the placenta holds good if there is *very excessive* loss of blood from a tear of the perineum, or of some part of the vulva, as of the bulb; but if the bleeding from such tears is not excessive, only moderate, the placenta should be allowed to continue *in utero* the usual ten or fifteen minutes, the uterus being carefully watched while measures are instituted for the control of the loss from the laceration.

The rule to remove promptly the placenta in excessive bleeding from a lacerated cervix, the uterus being retracted, is not an absolute one, provided the physician is favored by having a quick and reliable nurse, and the means are at hand for controlling such hemorrhage,—viz., hot water and the necessary requisites for its injection against the cervix. This measure will not only check the bleeding from the torn neck, but it will also stimulate the uterus into safe retraction.

Ergot is often administered as the child is being born, with the view of preventing hemorrhage, more particularly after the escape of the placenta. The objection for this time of the administration of ergot is that it may place the womb in a state of tetanic contraction before the escape of the placenta, and this structure may thus be incarcerated so firmly that etherization and dilatation with the hand will be needed for its removal. Such an effort does at times follow the resort to ergot at the ending of the second stage, but only as a rare occurrence. The action of ergot is usually noticeable only after a number of minutes have elapsed, so that after the onset of hemorrhage it cannot be relied on to the exclusion of other more prompt and, I will add, more certain agents. During hemorrhage it should always be given hypodermically. When thus administered its action is decidedly more prompt and more certain than when given by the mouth. Yet, in shock and after considerable exhaustion from loss of blood, ergot, when used hypodermically, is an unreliable agent, and if given by the mouth it may produce vomiting, when not only is its oxytocic effect lost, but the prostration from vomiting is superadded to that due to shock or other cause. This drug is of greater value in preventing relaxation of the uterus after it has once been well retracted, and it is of special value in diminishing that gradual leakage from the placental area which at times constitutes a too great lochial flow. It is of little value in checking a hemorrhage actively progressing, because of the slowness and uncertainty of its action. Yet it should always be administered in hemorrhage, be-

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cause of its value in maintaining retraction of the womb after that condition has been secured by means of other more prompt agents. I know of no remedy which, acting after its entrance into the circulation, is equal in its oxytocic effects to ergot.

There are serious objections to the introduction, during hemorrhage, of the hand into the uterus or into the vagina to remove a retained or loosely-attached placenta. In hemorrhage the existence of a tear of the upper vagina or of the cervix cannot be excluded. Such a tear may exist, and the passage of the hand into the genital canal, or more especially its withdrawal when grasping the after-birth, will most probably increase the extent of the laceration and add to the contusion of tissues. Hemorrhage from the tear will be increased, the liability to subsequent sloughing or to inflammation be enhanced, and shock induced, or, if present, aggravated, not to dwell on the additional danger of transferring manually septic poison. The latter accident ought never to occur, with the light thrown by our somewhat recently attained knowledge as to its occurrence and its prevention. The bulk of the hand may even originate a laceration in tissues that have been greatly weakened by being compressed and overstretched by the emerging child. If the placenta is so adherent that external manual expression cannot secure its removal, and hemorrhage continues, it will be necessary to introduce the hand promptly but cautiously into the uterus, and properly to secure the detachment and extraction of the after-birth. But it is always unfortunate when such a manœuvre is necessitated.

If the physician does not reach the patient until she is in a state approaching syncope from excessive loss of blood, and the placenta has not been delivered, and the hemorrhage is in abeyance, it will still be best to express the placenta with the hand externally applied, being at the same time exceedingly careful to secure full uterine retraction during and after its expulsion. If the after-birth is still longer allowed to remain, the bleeding may occur at any moment, and a fatal result follow.

If, however, in such a case of extreme exhaustion from loss of blood, the placenta is too adherent to be thus expressed, the bleeding being in abeyance, it becomes a serious question as to the propriety of immediately introducing the hand for its detachment and extraction. The shock thus aggravated may prove fatal in the then low condition of the woman. Under such circumstances it will probably be best while securing retraction, if possible, about the placenta, at the same time and without delay to direct proper measures towards the relief of cerebral anæmia.

If further hemorrhage does not supervene, it would be best, while treating the extreme exhaustion, to wait a short time for some reaction before extraction of the placenta with the introduced hand. If further hemorrhage should appear before reaction is apparent, the critical nature of the case is greatly intensified, and the immediate extraction of the hand in the uterus becomes an unavoidable necessity, with increased probability of a fatal result.

I doubt if the circumstances would ever be such as to warrant permitting the placenta to remain in the uterus for hours or for days, as has been occasionally advocated. In case of hemorrhage after the complete removal of after-birth and of membranes, any clots that have formed in the uterus may be easily removed by external compression without the introduction of the hand.

Now, as to the means for securing condensation after the uterus has been emptied. External compression will usually secure this, but not always. There is excellent authority for introducing the hand into the uterus and, by there moving it about, to excite contraction and retraction. I must, however, deprecate such practice as unnecessary and harmful. There is great probability of lacerating tissues or of increasing existing lacerations, of irritation and of contusion, of producing or aggravating shock. The procedure is a dangerous one, and, moreover, will not always produce uterine condensation, and may increase bleeding from lacerations. A patient thus treated, if escaping present dangers, will, by reason of this special treatment, be in increased danger from inflammation, sloughing, and secondary hemorrhage, and septic infection. The hand should never be introduced into the uterus solely with a view of provoking uterine condensation. Under some circumstances the hand may be introduced for diagnosis, as when there is reason to believe that a portion of membranes or placenta has been left, or that an intra-

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uterine tumor is present. Very rarely indeed, however, will it be necessary or justifiable to introduce the hand, except to remove such contents as are so adherent or incarcerated that they cannot be removed in any other manner. It has been advised to carry a peeled lemon or a cloth saturated with vinegar into the uterus with the hand, and then to squeeze it so that the fluid may stimulate condensation. To this procedure there are the same objections as those existing against the introduction of the simple hand. The juice of the lemon or the vinegar thus applied will superinduce contraction, and the hand will not remain long in the uterus, yet the very introduction and withdrawal of the hand are objectionable. The lemon-juice or the vinegar acts largely by reason of its astringent and irritant effects; but it is scarcely sufficiently an irritant to produce in itself special harm. The injection of diluted vinegar into the uterus is effective, doubtless, in securing contraction; the agent does not specially irritate, it does not produce hard clots through production of soft coagula, and it has the advantage of being disinfectant. Yet it is something of an irritant, is often not quickly accessible in sufficient quantity, and cannot well be employed to wash out the genital canal. It is a remedy against which strong objection cannot be urged, but I do not deem it the most feasible or the most desirable one. The use of a per salt of iron in different solutions in water has been largely practised and strongly advocated on the continent of Europe and in Great Britain. Its advocates are among those highest in authority as teachers, writers, and practical obstetricians. It is injected into the uterine cavity in Continental Europe in a deep wine-colored solution, and in Great Britain in the proportion of one ounce of Monsel's solution, or one ounce of liquor ferri chloridi, to three ounces of water.

This remedy cannot be so decidly harmful as its opponents have claimed. Had it so proved, it would not have continued until now in the confidence of so many able and experienced physicians. There are to my mind, however, objections to the iron salt which do not obtain against some other agents. It acts chiefly by producing coagula in the patulous vessels, and I have already insisted that such thrombi should be assiduously avoided; it also produces hard clots, which remain in the uterine cavity as irritant masses, provocative of inflammation; it has a minimum of influence in securing uterine condensation; after its employment, and after the hemorrhage has been checked, the womb will be found large and soft, evincing imperfect retraction. In other words, the calibres of the uterine vessels are not obliterated. They must contain coagula liable to all the changes in character and in location that such thrombi under such circumstances are usually liable to. There must be danger of septicæmia or pyæmia resulting, of undue inflammatory action, or, at best, of tardy convalescence. If used at all, I should prefer the stronger solution, as most likely to excite that special desideratum, decided uterine retraction. Swabbing the interior of the uterus with a cloth or a sponge saturated with the undiluted solution of the Pharmacopœia necessitates the introduction of the hand into the vagina, and partially or completely into the uterus, in addition to the other objections to the employment of a per salt of iron. I feel that a resort to this use of iron will be rarely necessitated, and that the agent should be reserved for such very rare cases as do not respond to other treatment.

The tincture of iodine has been recommended as a substitute for the iron salt. It certainly does not produce hard coagula, as does the iron, and must doubtless stimulate uterine retraction. But it is not reliable, except in a somewhat concentrated state, when it is too irritating.

Ice introduced against the cervix, or, most effectively, into the uterus, becomes a decided, and generally a reliable, stimulant to condensation. But the hand must be usually carried into the vagina in order to introduce ice into the uterus. The injection of cold water into the uterine cavity is free from this objection, and is generally reliable. The application of ice to the abdomen, while at the same time compressing the uterus with the hand externally, is also usually of great service. The cold douche over the abdomen from a height is certainly a very powerful reflex stimulant to the uterine fibres, but it floods the patient and the bed. The objection to cold in any form is that it is liable unduly to chill the patient, and possibly to contribute thereby to exhaustion, and thereby to inflammation, etc. An objection even more vital is that in great pros-

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tration cold in any form loses its power to excite uterine contraction, and the hemorrhage continues. I have in the past had much satisfaction in the use of cold. In one instance I nearly lost my patient by trusting too long to its influence. I was forced in that case to resort to Monsel's solution in order to prevent a fatal result.

I come now to a remedy not so long in vogue, but one that has in my hands given most satisfaction. I refer to hot water. Freely injected into the uterus at a temperature of about 112° or 115° F., it is a very prompt excitant of uterine retraction.

It will produce this effect with greater promptness than will cold water or ice, and will bring about uterine condensation after ice has failed because of the patient's great exhaustion. It should also be applied externally over the abdomen. I am in the habit of folding a towel as a flat compress, saturating it with water as hot as my hands will possibly endure, and, squeezing out the redundant water, to apply the wet and hot towel on the abdomen, and then, placing my hand on the towel through it, to compress the uterus. The womb will be felt to harden promptly even when the same manœuvre with iced water has previously not succeeded in obtaining condensation. The remedy may be rendered disinfectant with permanganate of potash, carbolic acid, etc., or even more efficient in producing retraction by the addition of vinegar, though I have never seen this addition necessitated. Hot water controls bleeding from the placental site by securing with certainty prompt and complete condensation. It has no, or at least very little, influence in the formation of thrombi; it washes out all clots and leaves the uterus clean; it will secure condensation after other agents have, by reason of the patient's exhaustion, failed; it is operative when the patient is under ordinary etherization; it controls bleeding from lacerations at the same time that it controls the loss of blood from the placental area; it controls bleeding from the laceration by producing contraction of the vessels, and not by causing coagulation of the blood; it is more invariably attainable than other agents, and can be had in all seasons and in all climates.

The water should be hot enough,—as hot as the hand, or, better, the uncovered arm, can endure. This degree of heat is not usually painful to the patient, excepting to a limited extent at the external genitals. There is no shock resulting from its use: it is a remedy against shock. It is followed by an increased feeling of comfort. It will regulate irregular uterine contraction by stimulating the entire body into contraction, and will thus check bleeding when superinduced by paralysis of the placental area. It is valuable in the prevention of hemorrhage in "bleeders," or in any case in which there is reason to expect undue loss of blood.

Of all remedies directed towards the stopping of post-partum hemorrhage, hot water thus combines the maximum of promptness and certainty with the minimum of noxiousness to the patient.

To summarize very briefly the line of management, I would say, as soon as the child is born, secure, with the hand over the abdomen, retraction about the placenta; if hemorrhage occurs, express the placenta and continue with the hand externally to effect retraction. If the bleeding does not promptly stop, inject hot water in considerable quantities into the cavity of the uterus. While the injection is being effected, apply or have applied at the same time a hot wet compress over the abdomen, and, by a hand placed on this compress, make firm pressure on the uterus. Ergot should be as soon as possible injected hypodermically, but the above measure should take precedence in time of application.

In post-partum hemorrhage dependent upon a laceration of a cancerous cervix, I have had of late no opportunity to use the hot water. In such a laceration it should be employed; but if the bleeding is not quickly controlled, a piece of cloth saturated with Monsel's solution should be pressed with the fingers against the bleeding surfaces. In post-partum bleeding following placenta prævia I have not used hot water, but should expect its favorable action. In one such case, swabbing the placental area around the internal os with Monsel's solution acted so promptly in preventing death that I should prefer at once to resort to this remedy in such cases. I should never make an application of Monsel's solution by way of merely preventing hemorrhage even in cancer of the neck, nor in placenta prævia; for bleeding after labor is not an invariable accompaniment of either of these conditions.

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There are not a few minor adjuvants in the treatment of post-partum hemorrhage, such as compression of the aorta, lowering the head, admitting fresh air, etc., which are more or less valuable, but which do not demand discussion in this paper.

In cerebral anæmia following an excessive loss of blood, the hypodermic injection of stimulants—whiskey, ether, etc.—is of very special value, as absorption in syncope from the stomach is very slow or in total abeyance.

Small doses of an opiate aid in filling the cerebral vessels, diminish shock, and quiet restlessness.

Of other remedies indicated or recommended I must refrain from speaking, because of the already probably too great length of this paper.

WOODILEE: A MODEL LUNATIC ASYLUM.

BY M. S. SEIP, M.D.

FEW institutions of like age, erected for the benefit of the pauper insane, are so well and so widely known as the Barony Parochial Asylum, better known as "Woodilee," located at Lenzie, near Glasgow.

It is not my intention to discuss the various important questions which are no longer matters of experiment in this asylum, but briefly to narrate a few facts learned by a residence in the institution, with every opportunity of examining into its workings.

The building exhibits the general features of the modern British asylum, and is intended for the benefit of the pauper insane belonging to the city of Glasgow. In order that the new plan of utilizing the labor of the patients may be fully carried out, the amount of ground is greater in proportion to the number of patients than at any other asylum in Great Britain,—viz., four hundred acres, with a nominal population of five hundred. The results obtained already by the use of patients' labor have been exceedingly encouraging, inasmuch as it is stated that there is but a trifling difference between the present cost of support in the institution and the cost by the undesirable method of "boarding" out, now obtaining some support from the Scotch Commissioners in Lunacy. There will be in practical operation ere long a method devised by the present superintendent, Dr. Rutherford,* and styled by him "The System of Location,"—a plan which might be examined in detail with profit by the authorities of some of our crowded Western institutions.

The impolitic plan of boarding out patients, which is neither profitable to the authorities nor just to the patient thus placed in the hands of unsuitable persons and removed from proper medical supervision, seems to be gaining some ground in Scotland, although on the decrease in the "Lunatics' Paradise" at Gheel; but there is little doubt that after a few years' trial of the "system of location" the unwisely economic plan will be discontinued. There is nothing complex or expensive in this system, as introduced at Woodilee. A number of neatly-constructed, substantial buildings are located at suitable parts of the hospital farm, with accommodation for ten or twenty quiet patients, managed by an attendant and his wife, each cottage having a vegetable-garden varying in size from one to two acres in proportion to the number of residents. The patients are employed in various ways,—the majority in the garden, several in the kitchen and bedrooms, and one or two in conveying the requisite supplies from the main building, and doing other chores.

The benefits of the plan are obvious, as the patients are under suitable medical supervision, are in direct association with persons accustomed to the duties and responsibilities of the situation, have little to suggest asylum life, and seem as near to sane surroundings as at present seems practicable and economical.

Two buildings are at present in successful operation, and in the main farm-buildings there will be accommodation for fifty patients, who, under suitable supervision, will perform the bulk, if not the whole, of the farm labor. In the course of another year there is to be one cottage fitted up to be occupied by females, who will likewise have garden-exercise compatible with their strength, and not without reasonable hope of success.

The benefits of open-air labor, whether productive or not, are aptly set forth in the following remarks, quoted from a Report of the Argyll and Bute Asylum when in charge of Dr. Rutherford, in 1872:

* One of the translators of Griesinger's Treatise on Insanity.

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"Insanity is a disease of diminished vitality, and when present the system demands a stimulus. Experience proves that there is no stimulus equal to active out-door employment and abundance of fresh air. The more this system is carried out, the plainer may be the food and the fewer the extras needed to maintain the standard of health, because the patients are brought into the condition and demand rather the fare of ordinary laborers than of lunatics kept under the irritating and depressing influence of forced confinement. Under this system the quiet and order in-doors is increased and the breakages and destruction of property diminished."

The farm and garden furnish employment to three-fourths of the males occupied, the remaining fourth being mainly employed in the wards and shops, four-fifths of the male population performing some variety of useful labor. The working-hours are not lengthy, being from nine A.M. to one P.M., and from two to six P.M., for the majority of those employed. Previous to the division into working-parties for the day they are formed in line for a hasty review by the superintendent and assistant-physician, accompanied by the head attendant.

The females are kept busy systematically with knitting and sewing, five-eighths of the number being employed in that manner, the value of the labor at current wages being one thousand five hundred and eighty-seven dollars for the last fiscal year. The laundry employs forty patients, in charge of three attendants, whose combined labor for one year is estimated at five thousand two hundred and twenty-two dollars. In order to carry out the occupation plan, there are neither sewing-, knitting-, nor laundry-machines in use. From the fact that the patients are derived from the laboring classes, the inference is drawn that employment is most suited to their usual life, and amusement is therefore deemed secondary and made subservient to occupation. There is, however, a sort of holiday on Saturday afternoons, and during the summer months there is a weekly entertainment consisting of dancing, the dances alternating with songs by volunteers from the patients and attendants. This entertainment takes place semi-weekly during the winter months, there being also an occasional concert by amateurs from the adjacent village and from Glasgow.

The treatment of acute cases in general is by rest and free exhibition of easily-assimilated food, chiefly milk and eggs, but an almost absolute absence of narcotics and stimulants. The use of beer, so common in the dietary of British hospitals, has been discontinued, reminding one forcibly of our own institutions. Acute cases, attended with great excitement and violent tendencies, are placed under the direct supervision of two experienced attendants, with suitable instructions, consisting mainly of open-air exercise of several hours' duration daily and continual oversight of the case in the day-rooms until the excitement is sufficiently subdued to require the attention of a single attendant, the case finally receiving the same treatment as the average patient.

There are no special departments for refractory cases, a number of them being found in each division, although suitable provision exists in several divisions for emergencies. By examination of the minute-book kept by the night attendants, and by a series of visits throughout the entire building between the hours of nine and twelve P.M, the results which one might expect from the disuse of narcotics were not found, the records of the female side for the month preceding my visit exhibiting an average of two "noisy" cases, the results being furnished by four persons. Notwithstanding a very liberal number of occupied persons are on parole, under more or less supervision, the granting of parole to unoccupied persons is deemed not advisable.

Although Woodilee was not the first to inaugurate the open-door feature, it is more thoroughly practised than in any other institution. It must not be supposed that patients are allowed more liberty than in the ordinary locked hospital. The main points claimed for the principle are the removal of another feature of resemblance between an asylum and a prison, and the compelling of attendants to exercise closer supervision over their charges. To this end, keys are allotted only to the head attendant of each division, the doors opening into the grounds being locked from six P.M. until eight A.M.

From the official record of accidents, suicides, and important events furnished annually to the Commissioners in Lunacy, it was found that there has been one serious accident since the opening of the asylum

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seven years ago,—that of a paroled patient who was killed on the railway.

Various visiting physicians from France, Germany, England, Ireland, and our own country unite in the statement that Scotch lunacy differs materially from that found in their respective countries. By consideration of the following sparse notes of cases admitted since the beginning of the present year, it may be seen that there is not such a wide difference between them and those furnished by examination of the case-books of our average asylum covering an equal amount of time.

James F., admitted January 12, 1882. "Hears voices, and jumped into the Clyde to put an end to it."

Charles G., admitted January 24, 1882. "Attempted suicide by throat-cutting, owing to people putting electricity upon him."

John M., admitted January 30, 1882. "Has various delusions, and, when taken to the police-office, smashed all the windows and lay on his back playing imaginary instruments all night."

Adam W., admitted March, 1882. "Said to be dangerous, and is smeared with his own fæces;" "is unimproved" at last memorandum.

M. H., admitted April 10, 1882. "Ran out of his house naked, has smashed things in the house, and has threatened others." On April 11 he is troubled with insomnia and receives divine commands. On the 18th he is less excited, and works with other patients on the farm.

James R., admitted August 9, 1882. "His wife says he tried twice to stab her. Had to be discharged from employment, as his employer was afraid he would be killed."

Mary McC., admitted January 6, 1882. "Has attempted her mother's life, and exposes her person in public."

Flora McK., admitted February 10, 1882. "Patient cut her throat, and is anxious to be out of control, to kill her daughter."

Jane D., admitted March 18, 1882. "Patient talks incessantly, is excited, incoherent, indecent in her language, and quite unmanageable." On March 28 there is "considerable improvement," and "works daily in the laundry."

Jemima D., admitted March 10, 1882. "Talks incessantly. Took a hammer to kill her husband. Attempted to throw several pound-notes in the fire."

Marion B., admitted July 14, 1882. "She sits in a corner shouting incessantly. Occasionally very violent, and smashes everything she can lay hold of." Assistant-physician's note: "She is very much excited, talking, shouting incessantly and incoherently, also continually in action." This condition continues for six weeks, when "general improvement ensues."

Ann McD., admitted August 17, 1882. "A puerperal case, who attempted suicide and tried to drown her child."

One of our American journals, commenting upon Woodilee, says that "the people have more respect for authority, and hence are easier to manage;" but, if that were the fact, excellent results should be seen in the German asylums; yet a German asylum physician visiting Woodilee recently made the usual statement concerning the difference in patients. One alleged reason for the results accomplished at this asylum lies in the fact that, owing to the poverty of the patients, as a rule, they are promptly brought to the asylum, and are thus placed under the most favorable opportunities for improvement, and therefore more amenable to discipline.

The most important lesson taught by this asylum is that of employment. It is especially important to us in America, for our tendency is towards amusement rather than employment.

While we cannot, for various general and particular reasons, accomplish the results reached at Woodilee, it nevertheless behooves us to be on the alert to keep pace as far as possible with our Scotch brethren.

TRANSLATIONS.

DEAFNESS FOLLOWING MUMPS.—The metastatic disorders occurring in the testes, the ovaries, or the mammary glands during an attack of parotides or mumps are well known, and are usually looked for; but it is less well known that a similar accident may occur in the organ of hearing, and produce changes that result in permanent and complete deafness. Although Toynbee, in 1860, pointed out the fact that the peculiar poison of this disease often causes complete loss of hearing, though ordinarily limited to one ear, and concluded, from its sudden appearance, and the entire absence of abnormal appearances in the tympanum or auditory tube, that the nervous elements were at fault, the fact seems to have been very generally overlooked, and a tendency exists, when it is found, to attribute it to other causes rather than to labyrinthine disease. The views of Toynbee, however, have been recently reaffirmed by A. Buck, who, at the last meeting of the

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American Otological Society, reported two cases in which permanent deafness resulted. Moos and Brunner have likewise since reported cases. The last-named authority draws the following conclusions from a review of all the published cases:

"Nervous deafness consecutive to the mumps may be uni- or bilateral; more frequently unilateral (three out of five). It is always complete, and, so far, incurable. It is developed very rapidly,—that is to say, in a few days,—with violent vertigo and subjective noises, symptoms which persist for a time. Fever is not necessarily connected with this invasion of the organ of hearing, because it is not found mentioned in the recorded observations. Pain has been observed only once. There is no loss of consciousness, and the general condition appears satisfactory. The disease appears in the young as well as in adults." He further called attention to the strong resemblance existing between this disorder and the malady of Ménière and to that of Voltolini. In the latter states there is always a sudden exudation, either serous or hemorrhagic, because the general symptoms do not warrant the idea of a purulent exudation. But even when it is serous and tending to spontaneous absorption the prognosis is not the less grave, since the delicate organs of the labyrinth are enclosed in an inextensible bony case. If complete atrophy has often followed parotid-orchitis, we understand why it should do the same in the organ of Corti, only to a degree more marked.

The analogy between these two diseases is indeed striking. As for the explanation given of metastasis, it is not generally adopted: thus, Combeau considers parotides as a general malady, with multiple local lesions (conjunctivæ, pharynx, urethra, testicle, ovary, vulva, etc.), a theory, however, which explains less well than that of Moos the tardy appearance of localizations in other organs than the parotid gland.

Dr. Calmettes reports a case in a child of six, in which both ears were affected, without discharge, pain, or tinnitus aurium, but the deafness was not quite complete. At the end of eight months he could still hear a loud voice, but there had been no decided improvement. It is very probable that an examination of the ear would have revealed a labyrinthine lesion.—*La France Médicale*, No. 8, 1882.

PERI-SPLENIC ABSCESS.—In an article on "Purulent Peri-Splenic Collections," C. Zuber reports two interesting cases in which such purulent collections were found after death, the true character of which had not been suspected during life. In one of the cases the post-mortem revelation was a complete surprise, because no symptoms had been observed calling attention to the left side; and in the other there was an error of diagnosis, as the case had been considered as one of intra-abdominal malignant disease. The notes of these cases are given at length; both had a history of repeated malarial attacks. Following these is a brief consideration of other cases contained in medical literature of this very rare form of disease.

The more important points of this essay may be summed up as follows:

1. In the upper portion of the abdomen are found purulent collections, which are called peri-splenic abscess, although they only touch the spleen at one part of its surface, and are not at all localized in the sub-serous connective tissue of the spleen. They occupy by preference the irregular space bounded by the stomach, the spleen, the colon, and the diaphragm. These collections are the last stage of circumscribed peritonitis, due ordinarily to lesions of the spleen or the digestive tube. The infectious form of splenitis (comprising herein the lesions of malaria), and the round ulcer of the stomach, appear to play the principal rôle in these intra-abdominal abscesses.

2. The purulent collections of digestive origin contain gas, and their character is shown, with remarkable uniformity, by a resemblance more or less complete with pyo-pneumothorax, the more so because they are only separated from the pleura by the diaphragm, which is strongly pushed upward. The nature of these cases of false pyo-pneumothorax will be recognized at first by the existence of grave digestive disorders, and subsequently by the variability, the exaggeration or insufficiency, of the symptoms observed.

The collections of splenic origin are scarcely ever characterized by tumefaction and pain of the hepatic region and the general signs of latent suppuration; rarely, by tumors more or less marked or fluctuating. The diagnosis will scarcely be made except by exclusion.

3. Whatever may be the origin, the depth, or the extent of these peri-splenic

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collections, they are not above the resources of modern surgery. It is this practical point of view which will dominate the question. No effort should be spared in order to determine the existence, and then the nature, of the abscess; and exploratory punctures, either deep or multiple, should not be too much feared. Made methodically and prudently, such explorations bring only an insignificant danger, as the recent literature of hepatic abscess abundantly shows: they alone may be, on the contrary, the point of departure of a truly rational and useful therapeutic method.—*Revue de Médecine*, No. 11.

HYDATID CYSTS IN THE HEART AND SPLEEN.—M. Renault reports the following rare case to the Société Anatomique (*La France Médicale*, No. 44):

A man, 63 years of age, was admitted into the Hôtel-Dieu complaining of gastric trouble, with nausea and vomiting. He had become jaundiced for several days, and his conjunctivæ and integument were plainly icteric; his urine contained considerable bile-pigment. He also complained of pains in the right hypochondrium, which were sometimes severe. The diagnosis of hepatic colic was made. Ten days later the jaundice was more marked, the urine was very much diminished in quantity, bowels constipated; there was vomiting of black fluid, evidently hæmatic. The pulse was not accelerated, but there was slight fever (38.3° C.). Physical examination did not reveal any visceral alteration; the lungs were healthy, there was a faint systolic apex-murmur in the heart, and the spleen did not appear increased in volume. Two days later, death from coma and exhaustion occurred.

At the autopsy the liver was soft, fatty, and deeply stained with bile, the cystic duct and gall-bladder were distended with bile, the latter being larger than the fist, but no calculi were detected. The kidneys were swollen and intensely congested, one showing a cicatrix from an old cyst. The lesions of greatest interest, however, were found in the heart and the spleen. No pericardial effusion was present. On the surface of the heart was discovered a tumor, the hardness of which contrasted greatly with the flaccidity of the rest of the organ. This tumor was situated in the left portion of the apex of the heart, embedded in the thickness of the wall of the left ventricle; it did not extend towards the septum. Upon section it was found to be formed by an hydatid cyst of the size of a hen's egg, containing a slightly opaque liquid. The pouch was yellow-colored; it was spontaneously enucleated after the opening of the cyst. In the spleen, similar cysts were found: two of the size of a pigeon's egg projected from the periphery; another, much larger, about as large as the fist, was seen upon its internal aspect,—looking, in fact, like a second spleen attached to the first. This one contained about ten secondary vesicles as large as marbles, and many others much smaller. Echinococci and hooks were detected in the fluid by the microscope.

It is especially noteworthy in the above case that the liver, the lungs, the brain, and the muscles were entirely free from the parasites, the heart and the spleen being alone involved. Moreover, hydatid cysts of the spleen are usually single; these were multiple; and the heart-lesion was situated near the left apex, whereas ordinarily the cysts are known to appear in the right ventricle or the septum.

SEPTIC POISONING BY INOCULATION OF FLUIDS FREE FROM BACTERIA.—From a series of very carefully conducted observations upon animals, Rosenberger found that the injection of cooked and absolutely germ-free septic poison of malignant œdema, or contagious septæmia, was sufficient to cause a fatal result, and he succeeded in infecting other animals by injecting a proportionately small quantity of the serum or the blood, and from these others in the same way. It is noteworthy that in all these experiments the blood both before and after death was found to contain the same bacterial forms as in the ordinary cases of septic poisoning following the introduction of fluids containing bacteria. He concludes that, through the influence of those agents, the micrococci always pre-existing in the blood, and therefore not pathological in their character, become transformed into the specific septæmic bacteria. He points out also the different results obtained by injecting these fluids into living animals in which the bacteria are developed, and the culture experiments in vessels out of the body where such development does not occur.—*Centralblatt für Chirurgie*, No. 29; Rosenberger, *Ueber das Wesen des septischen Giftes.*

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PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, DECEMBER 16, 1882.

EDITORIAL.

CHANGES IN THE STRENGTH OF PREPARATIONS IN THE NEW PHARMACOPŒIA.

THE new Pharmacopœia is before us, a completed work, brought forth with much labor, for the guidance and support of the profession in these United States. It is a handsome volume, whose revolutionary character is not betrayed by its smooth exterior and orthodox-like, pleasant typography. We do not intend at present to write a critical review of the book, but simply to give notice of such of the more important changes as have been made, which it is necessary that the prescriber should bear in mind. In the present editorial we notice only alterations in strength; in a future issue we propose to discuss the additions and dismissals.

First of these are the changes in the strength of the liquid opium preparations, all of which, except paregoric, are so made as to contain ten per cent. of opium. By this change both laudanum and deodorized laudanum are increased according to the official statements of the Pharmacopœia eleven per cent. in strength, whilst the wine, vinegar, and the acetated tincture are much degraded. If, however, the process and directions of the 1880 Pharmacopœia are strictly followed out, the result will be a tincture which will contain on an average about six grains of morphia to the fluidounce, whilst our old laudanum has about four grains to the ounce. Such a change is outrageous enough, and full of danger; but the official statements concealing the change, whether from purpose or from ignorance, are deadly. The only way to prevent fatal error seems to be for the pharmacist to label his laudanum U. S. 1880, and to put up the old preparation for prescriptions unless otherwise ordered.

The diluted mineral acids are also made of a uniform ten per cent. in strength, involving changes, however, which are not sufficient to affect the dose, except in the cases of hydrochloric and sulphuric acids, the former of which has been increased one-fourth in strength, the latter decreased one-sixth. The fetich of ten per cent. again receives homage in the case of spirits and tinctures, although here the worship is only employed to make the existing chaos more dreadful,—since many tinctures are altered to ten per cent., others are let alone, and others are lowered, or elevated, as the case may be, to twenty per cent. This reckless altering of old preparations without any sufficient reasons is one of the blots upon the new standard authority. It has no more forcible illustration than in the omission from Dover's powder of the sulphate of potassium. In such a change there can be no gain, and there may be serious loss. By the way, the regular decennial alteration of the name of Dover's powder is also indulged in.

Of the important spirits, camphor has been weakened nearly one-third, whilst peppermint and spearmint have been increased nearly sixty per cent. Tincture of aconite root has been reduced one-seventh, and its name has been changed to simple Tincture of Aconite. Compound tincture of catechu has been nearly doubled in strength; tincture of nux vomica has been decreased about forty per cent., of stramonium and of serpentaria thirty-three per cent., of veratrum viride ten per cent., of ginger about forty per cent.

A very dangerous change is in the case of the *extract of aconite*, which is now to be made from the root instead of the leaves, although the old name of Extractum Aconiti is retained. There are, therefore, three preparations to which the name may be at present applied by the prescriber or

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compounder: first, the old hydro-alcoholic extract of the leaves (*U.S.* 1870); second, the fresh-juice English extract; third, the root extract (*U.S.* 1880). The new extract is probably more than twice as strong as the hydro-alcoholic extract of the leaf, and at least six times as strong as the fresh-juice preparation. The doses of the three extracts, whose name is the same, are, respectively, No. 1, one-half a grain; No. 2, one and a half grains; No. 3, one-sixth of a grain. Now, it is plain that the difference here is enough, under possible circumstances, very seriously to compromise life.

Dr. L. P. Yandell thinks he has been widely misrepresented in regard to his views as to the cause of skin disease. He says, "What I have contended for, and what I have reiterated, is simply this: Malaria is the *chief source* of *acute* skin disease." In this correction, it seems to us, he is only a little less wrong than in the misrepresentation of him. To one living in Kentucky the error is, however, a very natural one. In that State malaria is probably the chief cause of all acute diseases, and a very common factor in the etiology of chronic ones.

LEADING ARTICLES.

RECENT STUDIES OF THE MICROBE OF MALARIA, AND OF THE GERMS AND MICROZYMES CONTAINED IN MALARIAL AND IN OTHER SOIL.

CAREFUL investigations recently made by Richard,* Laveran, Kelsch, and very recently by Prof. Antonio Ceri,† with regard to the proximate cause of malaria, have succeeded in obtaining results worthy of our consideration.

Richard‡ found existing in the blood of persons who were suffering from malarial fever a microbe which Laveran has named Oscillaria malariæ, which seems§ to have the red blood-corpuscles for its special habitat. It develops in them in a manner similar to that in which the rhyeworm does in the lentil. If the blood of an individual suffering from malaria be examined, there will be found among the red corpuscles some which present on their circumference a very minute, light, and perfectly round spot; otherwise they look exactly like, and have the same normal elasticity as, the other corpuscles. Others are met with in which the development of the microzyme has progressed further; the light, clear spot is now larger, and is surrounded by a wreath, as it were, formed of very fine black nodules; around them hæmoglobin, which is easily recognized by its yellowish-green color, is deposited in the form of a ring, which diminishes the larger the microbe grows, until hardly anything is left of the cell but a small, perfectly colorless marginal zone, in which not a trace remains of the hæmoglobin. The body of the red corpuscle is reduced to its envelope, the interior being filled out totally by the oscillaria. The latter has the shape of a circular body the size of the corpuscle, and is surrounded by a ring of black nodules.

The now fully-developed microzyme, which possesses several, though scarcely visible, prolongations, then penetrates the membrane by which it is surrounded, and escapes into the serum of the blood, or rather into the liquor sanguinis. Dr. Richard claimed that he had been able to observe this process a number of times. Occasionally it happens that the fine prolongations or fibres, which possess motion, alone penetrate the membrane in which the body of the microzyme continues to reside. In some cases, here and there, the latter is observed to move, and its fibres oscillate rhythmically, as thin twigs would do when held by their thicker ends and rapidly shaken. These motions seem to act like a whip on the other red corpuscles, thus increasing their rapidity of locomotion. Sometimes the outer, free, and slightly-swollen ends of these fibres become entangled in a loop of the fibrous net. In such a case it is the body of the microbe which evinces the most motion,

* Der Parasit der Malaria. L'Union Pharmaceut., vol. xxiii

† Dr. Ant. Ceri, Prof. of Path. Anat. at the University of Camerino, Italy. Arch. f. Exper. Pathol. und Pharmacol., 15 Bd. 3 und 4 Heft, and 16 Bd. 1 und 2 Heft, 1882; Allg. Med. Cent. Zeit., No. 72, 1882, October 9.

‡ Loc. cit.

§ Allg. Med. Cent. Zeit., No. 54, 1882, July 8.

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while the movement of the fibre is such as if it were trying to get rid of its entanglement. In about an hour,—sometimes earlier, and occasionally a little longer,—all movement ceases, and only the dead body of the parasite is left. These peculiar movements are noted only in fully-grown microzymes, for in less developed and very small ones no vibrations can ever be observed. The dead parasites stretch themselves out, lose their shape, the ring containing pigment is dissolved, and the whole appears as a gray mass, including a few black nodules. This same fact has been noted also of late by Kelsch and a few other observers.* These liberated nodules are again rapidly absorbed by the leucocytes and taken up into the blood.

Richard was able to demonstrate in the blood of all persons suffering from malarial infection who came under his charge the presence of these microbes, and frequently in very large numbers,—the severity of the disease apparently determining the number of the oscillariæ, and *vice versa*.†

The researches of Prof. Ceri‡ are far more elaborate. They may be divided into three parts:

a. Cultures of micro-organisms present in different kinds of soil.

b. Experiments on animals.

c. Cultures with quinine.

While it would occupy too much space to give all the details of these exceedingly laborious investigations, for the study of which we have to refer the reader to the original,§ we will report the results of each of these parts, and give a *résumé* of the whole.

The fluids of malarial soil not cultivated in an aquitrinum‖ contain only germs (spores); but the latter are far less numerous in malarial soil to which good plaster of Paris (gypsum) has been added. If natural and gypsumed malarial soil, however, be kept in an artificial aquitrinum, at the necessary temperature, many varieties of schizomycetes will develop themselves.

If malarial soil which is cultivated in an artificial aquitrinum be exposed for five hours to a temperature of 70° to 95° C., or for four hours to a temperature of 105° C., all varieties of schizomycetes which have been developed are destroyed, and only the spores continue to live. This explains the fact why during the hot, dry summer months there is very little malaria, but as soon as the temperature of the atmosphere begins decidedly to decline, the spores commence their development, and malarial infection is the consequence.

While cultures of malarial soil made under the high temperature mentioned cause the development of the different kinds of schizomycetes which primarily are present in the cultures of natural malarial soil, they produce a less septic fermentation and a weaker alkaline reaction of the culture-fluid. A similar difference is also noted in successive generations,—viz., in cultures from cultures.

Notwithstanding the fact that boiling the *superficial* layers of the fluid in culture-vessels, closed by sterilized cotton, totally prevents the momentary effect of the contact of atmospheric germs, it exerts no influence whatever on the rapidity and intensity of the development of the schizomycetes, which by infection have been transferred to the cultures.

If the *whole* culture (of soil) after infection be boiled in culture-vessels closed with sterilized cotton, the development of the schizomycetes is retarded for a few days, and the consequent putrefaction of the culture-fluid for a still longer time. This effect boiling also has on cultures from cultures.

The more frequently successive generations of the low organisms used for the purpose of infection have been cultured from former cultures, the more decided is the influence which the boiling of the *whole* mass under the precautions mentioned exerts in retarding the development of the microzymes and the putrefaction.

The number of successive cultures from the same original infectious material (microzymes) has by itself no influence on the development of the schizomycetes, but the greater the number the more apparent and decided is their effect in retarding the putrefaction of the culture-fluid. In the case of a great many generations, decomposition of the fertile cultures totally ceases, and the development is one perfectly non-putrid (proving the absence of septic micrococci).

* Allg. Med. Cent. Zeit., 1882, No. 54, p. 694.
† Ibid., 2d column.
‡ Patholog. Institut in Prag. Allg. Med. Cent. Zeit., 1882, Nos. 72, 73, 74, October 9, 13, 16, etc.
§ Arch. f. Experiment. Patholog. und Pharm., xv. 3, 4, and xvi. 1, 2, 1882.
‖ An apparatus specially constructed to be impermeable to water, and, if needed, to air, and so arranged that, while it can be drained or water added, the soil may be kept excluded from all deleterious influences.

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The effect boiling has in retarding the development of schizomycetes and putrefaction is regulated by the length of duration of boiling: the longer this is continued, the more the effect mentioned is augmented.

The more numerous the generations of the schizomycetes of soils are that have been artificially cultivated, the more intense becomes their vulnerability against boiling: if they are very numerous, a boiling temperature will destroy them.

Mineral manure* has not prevented the development of schizomycetes nor that of the micro-organism which by Klebs and by Tommasi-Crudeli has been described as Bacillus malariæ. When soil was impregnated with this mineral manure and these mycrozymes were cultured artificially in them, the resulting cultures evinced no differences from the same types of microbes cultivated in common soils.

When high and progressive temperature acts on dry malarial and other common soil, the effect is as follows:

a. The development of schizomycetes is gradually retarded, this retardation being exactly proportional to the high degree of the temperature and the length of time that the soil is exposed to it.

b. The septic fermentation of the fluid in fertile cultures is progressively retarded and at last totally prevented, the degree of temperature and length of exposure being here also proportional to the effect.

The power of resistance against high progressive temperature for germs (spores) and low organisms of dry malarial soil varies between 180° and 190° C.; of garden or cultivated soil, between 160° and 180° C. All cultures which had been instituted in soil exposed to a temperature above 160° C. were invariably and permanently aseptic.

On germs and low organisms perfectly dry and cultured in malarial and other soil by the addition of urine and then transferred (cultivated germs), the same conditions of temperature exert an analogous effect on retardation of development and on decomposition, but the power of resistance has in cultured germs narrower limits than in natural spores, it varying there between 130° and 140° C.

Schizomycetes of different origin, as, for instance, those of the atmosphere, resist the effect of continuous boiling, and do this the more the older the culture from which they were taken. Those derived from a typhoid intestine are destroyed when boiled for two hours, while the bacillus of pemphigus and the bacteria of anthrax are permanently annihilated.

While a momentary boiling is sufficient to protect a *pure* culture-fluid against the deleterious contact with the atmosphere, *infected* fluids have to be boiled for a long time to destroy the low organisms contained in them, the duration and degree of heat depending upon the nature of the microbes, and in some even the boiling-temperature not being sufficient for this purpose.

The second part of Ceri's work† treats of his experiments on animals.

Subcutaneous injections of fluid of malarial soil to which gypsum had been added caused in a rabbit mild, irregular febrile seizures, lacking the intermittent type, while such injections of fluid of natural malarial soil caused in other rabbits longer-repeated and intensive febrile attacks, showing plainly the intermittent character.

The pyrogenic effect of the first injections was milder than that of the second kind. Soils kept in artificial aquitrines possessed evidently a greater power of infection.

Subcutaneous injections of gelatin-culture of natural malarial soil caused in rabbits long-continued and intensive febrile seizures of the intermittent type.

Injections of fluid of malarial soil which had been cultivated in aquitrines and exposed to a temperature above 100° C. resulted in rabbits in the same attacks, but of a milder nature.

When the fluid of artificially cultured malarial soil had been exposed for ten days to a temperature of 35° to 40° C., hypodermic injections instituted with the same produced in rabbits intense febrile paroxysms of a decidedly intermittent type and continuing for a long period.

Gelatin-cultures of malarial soil were exposed to a temperature above 100° C. and then injected into a rabbit. On the fourth day the animal was attacked by a mild febrile seizure which did not recur. The same gelatin-cultures not exposed to a

* Consisting of lime, 1 : 20; sulphur, 1 : 50; borax, 1 : 15; chloride of lime, 1 : 20; arseniuretted sulphur, 1 : 50; charcoal, 1 : 15.

† Allg. Med. Cent. Zeit., No. 73, October 13, 1882; from Arch. f. Exp. Pathol. und Pharm., 15 Bd. 4 Heft.

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high temperature and injected into another rabbit caused within an hour an intensive febrile seizure, which recurred. Two rabbits were then taken: into one was injected natural malarial soil exposed to a temperature above 100° C., and into the other the same soil not influenced by the high temperature. Here the great difference as to pyrogenic effect became very apparent: the first rabbit was attacked by moderately intensive intermitting febrile seizures, while the second suffered from one of the most fulminant forms of malarial infection, with melanæmia and rapid death.

Subcutaneous injections of the third successive generation of natural malarial soil, whether exposed to a temperature above 100° C. or not, caused in rabbits only mild, recurring febrile seizures, but not until several days had elapsed after the introduction of the soil into the circulation.

Fourth generations of the same nature injected into dogs produced local inflammation, and, after a few days, mild recurring febrile paroxysms.

The fluid of a natural malarial soil, which when subcutaneously injected into a rabbit had evinced pyrogenic quality of an intense degree, was now evaporated, powdered to dust, and given to be inhaled by another rabbit. The same experiment was repeated with dogs. The result so far as any changes in bodily temperature were concerned was a negative one. The dust had been introduced into the bronchial tubes.

The fluid of natural malarial soil cultivated in aquitrines produced, when subcutaneously injected into dogs, far more intensive febrile seizures of intermittent character than did injections which had been previously made into the same dog of the fourth successive culture of malarial soil exposed to a temperature above 100° C. Natural malarial soil, if previously filtered through common filtering-paper, caused, if injected subcutaneously, no local phlogosis. The filtering had no effect upon the pyrogenic symptoms.

The intravascular injection of gelatin-culture of natural malarial soil produced in a rabbit immediate increase of temperature to a very high degree. The blood of the animal, examined on the second day after, presented many spores.

Even the intravascular injection of the fifth successive culture, which had been exposed to a temperature above 100° C., brought about in a dog a very great increase of temperature immediately, notwithstanding the culture had been a perfectly non-putrid one.

Subcutaneous injections of the second successive culture of malarial soil, to which lime had been added, induced in a rabbit very intensive fever and local inflammation. Such an injection made in a rabbit with the second successive culture of malarial soil, which had been manured with ashes, caused fever, peracute sepsis, and an intensive local phlogosis.

Generally when either the fluid of natural soil or that of cultures was injected, at the places of injection no local reaction was observed. Those cases in which high fever appeared were accompanied by enlargement of the spleen, and melanæmia of the spleen and of the spinal cord.* There were also present in the blood of such animals spores, and these were also found in the spleen and in the spinal marrow; sometimes bacilli were met with, and especially very long ones in the spleen. The effect of the high temperature decreased the pyrogenic effect of the fluids of the soils, causing sometimes also a retardation. In a similar manner does the influence of numerous generations act.

Very interesting is the third part of Ceri's investigations.† He instituted a series of 40 cultures, which contained different quantities of quinine from 1 : 100 up to 1 : 100,000. They were each infected by a drop of turbid fluid of malarial soil. The development was absent up to 1 : 900. From 1 : 1000 to 1 : 1500 non-putrid development began. With small doses of quinine, the smaller the doses the more rapid, intensive, and putrid was the development.

In a series of 18 progressive cultures containing quinine respectively from 1 : 500 up to 1 : 9000, all infected in the same manner, but with gelatin-culture of malarial soil, the development was absent from the solution of 1 : 1500; from 1 : 2000 up to 1 : 3000 non-putrid development existed; from 1 : 9000 the development began to be accompanied by putrefaction. This agrees nearly with the power of disinfection of quinine.

Another series of experiments (18) was made, in which the percentage of quinine

* l.oc. cit., p. 927.
† Allg. Med. Cent. Zeit., No. 74, p. 938 et seq.

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varied from 1 : 500 to 1 : 9000, and each solution was infected with a drop of the blood (containing the Bacillus malariæ) of a rabbit into which had been injected cultures of malarial soil. Here the development continued absent up to 1 : 2000, and at 1 : 2250 it was aseptic. The Bacilli malariæ did not develop in the fertile cultures, which contained only vibriones.

In a similar series of 18 parallel experiments, in which the quinine solutions had been infected with a drop of a culture containing schizomycetes of very different origin, and fluid of malarial soil, the development ceased with 1 : 850. Where the dose of quinine was less, the development was always a septic one.

Different cultures instituted with different larger proportions of quinine, but not under 1 : 600, and which after an infection with cultures of malarial soil, or by successive cultures of cultures, had continued sterile, showed after a second thorough infection sterility with a proportion of quinine of 1 : 580, development with 1 : 600.

With other culture-fluids, the infective material, however, of which was formed by the natural fluid of malarial soil, after a second thorough infection development began at the proportion of 1 : 400.

The development which commenced after second infection was accompanied by a very weak alkaline reaction and a very slight odor of decomposition. The long, thin, homogeneous bacilli (Bacilli malariæ) never made their appearance, the odor evidently being due to septic bacteria.

Generally the chemical reactions of fertile culture-fluids depended upon the proportion of quinine and the quality of the infectious germs.

Microscopical examination of the cultures, the infection of which was made with natural fluids of malarial soil kept for a long time in artificial aquitrines, showed invariably a decrease in the number of schizomycetes as soon as the proportion of quinine increased. In large proportions of quinine only spherical or bacillus-like organisms of most minute size came to development.

It may be taken for granted *that the muriate of quinine in the proportion of* 1 : 800 *prevents the development of any infectious germs;* but the fertility of a culture may depend upon the quantity of the infectious material. By the aid of a second thorough infection, cultures which after the first had been sterile for a long time may be made fertile.

The *natural* germs and low organisms of the soil are those which possess the greatest power of development. If they are cultivated in culture-fluids, or if they migrate through the interior of an animal organism, their power of infection decreases rapidly and progressively with each successive generation.

The very long, thin, homogeneous bacilli (Bacilli malariæ) very rarely appeared, even in cultures which contained very little quinine. In a series of eighteen cultures they were totally absent, notwithstanding they had been very numerous in the infectious fluid.

Having given a *résumé* of each part of Ceri's investigations, it may be well to endeavor, considering the many relations these facts bear to each other, to build up a theory based upon them.*

In the atmosphere and in the soil there are germs and spores which may develop themselves to higher organized forms under certain favorable conditions, according to differences in the infectious low organisms which are perhaps changing continuously. This development nearly constantly causes in the fluids and moist substances, in which they progress, chemical changes always differing according to the nature of the microzymes, and according to the chemical composition of the material which serves them as their habitation. The *toute ensemble* of these changes is called "fermentation." In case this development takes place in nitrogenous or albuminous substances, the highest chemical change induced by this development is the *putrid fermentation*, or putrefaction.

The germs and low organisms contained in the soils and in the atmosphere, possessing fully the septogenic functions, have been named by Ceri *natural germs*, while he calls those *cultivated germs* which are the result of artificial culture,—*i.e.*, which by artificial culture develop from the natural germs. Successive generations brought about by artificial cultures retard and weaken the putrid fermentation which is induced by low organisms in nitrogenous culture-fluids: this retardation and this diminution may increase up to total cessation of putrefaction. Brought under artificial conditions, these germs and low

* Arch. f. Experiment. Patholog. und Pharmac., 16 Bd. 2 Heft, 1882; from Allg. Med. Cent. Zeit., No. 74, p. 938 et seq.

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organisms suffer with each successive generation an increased retardation and weakening of their septogenic functions, and at last lose them entirely.

The influence of heat upon the germs is felt in two main directions, causing—1, retardation of their development up to its arrest; 2, retardation of septic fermentation up to its arrest. These consequences become, however, more apparent if the heat exerts its influence on artificial than on natural germs; and in successive generations this effect of heat can be still more noted, or, in fewer words, *cultivated germs possess less power of resistance to heat than do natural ones.*

The effect of muriate of quinine upon the germs is strikingly analogous to that of heat. Quinine also causes retardation up to total arrest of development of the germs and low organisms, and retardation up to total arrest of the putrid fermentation induced by them. And probably it will ere long be shown that none of the so-called anti-fermentative and antiseptic substances exert any other influence.

The analogy existing between the influence of heat and that of muriate of quinine permits the logical deduction of an analogy of cause, which latter may be considered as an inhibiting and destroying one.

The fermentation, too, which in the animal organism is caused by the germs—*i.e.*, the fever—is diminished and retarded or prevented when the inhibiting causes have acted upon the germs. In this way may be explained the retarded febrile seizures which appear after injection of successive cultures. The development of the germs may proceed without synchronous putrid fermentation (non-putrid development): it is probable that in such cases the low organisms present in the animal organism are not accompanied by fever, and the former are innocuous.

It should be mentioned that the non-putrid development cannot be explained by supposing the destruction of certain special organisms inducing the fermentation, as in such a case putrefaction and non-putrid development would have to be sharply divided from each other, while in reality, in consequence of the action of inhibiting causes, gradual retardation ensues, and we come by degrees through a series of gradual transitions to the arrest of septic fermentation,—a proof that the germs causing the putrid fermentation are gradually deprived of their functions, until the latter are destroyed without destruction of the germs themselves.

That this essential fact will play an important rôle in our doctrine of pathology cannot be doubted: what changes it will bring about it is difficult to determine at present. But we may already imagine a plausible hypothesis concerning the decline and gradual disappearance of some epidemics, as, for instance, the cholera. Individuals first attacked may be said to have been invaded by natural germs, the power of development and septogenic functions of which are very intensive. This explains why the types of disease appearing at the beginning of an epidemic are so grave and fatal. Gradually successive generations of the infecting microzymes form themselves, in consequence of which are developed gradually milder types of the disease, until at last their spontaneous cessation occurs, and there is a disappearance of the epidemic.

Regarding malaria we may suppose that the low organisms causing it very rapidly lose their infectious qualities, so that after their immigration into one animal organism they lose the faculty of inducing the disease in another. But in case they return under favorable conditions they may, by again becoming natural germs, again acquire their infectious qualities. In this manner we may explain the fact that localities having previously enjoyed immunity as regards malaria may become infected, notwithstanding malaria is not a contagious disease. The germs, even if they by becoming cultivated germs lose their infectious power, may, when carried into a suitable locality, and under favorable conditions, regain that power by again becoming natural germs. That malaria has been carried by human beings into localities hitherto free of malaria, has been proved by undeniable facts; and Ceri himself has been able to observe grave malarial epidemics as they broke out at Spinetoli, in the province of Ascoli-Piceno. But infected localities may become disinfected of malaria, whenever favorable conditions, which are necessary to preserve the *natural* quality of the germ, cease to exist, or are removed.

It is further probable that not all infectious microzymes lose their power of

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resistance so rapidly whenever successive generations have developed themselves under *not natural* conditions, and it may be supposed that some germs find in the animal organism a soil favorable for their *natural* development. To these may belong microbes which cause anthrax and other contagious diseases. But systematic investigations will be necessary to find out the laws under which inhibiting causes act upon successive generations so as to deprive them of all or of some of their natural functions. Pasteur's experiments are explained by Ceri's researches.

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PROCEEDINGS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, NOVEMBER 23, 1882.

The PRESIDENT, Dr. JAMES TYSON, in the chair.

Hypertrophy of heart due to valvular lesions. Presented by Dr. M. O'HARA.

J. H., male, æt. 30 years, laborer, contracted syphilis when 18 years of age. Health good until within past three years, when he began to suffer from pain in the left breast, palpitation of the heart, and slight dyspnœa after violent exertion. Gradually becoming worse, and unable to work, he was admitted into St. Mary's Hospital in June, 1882. He then complained of great pain over the upper part of the sternum and in the left arm and shoulder. He had lost considerably in weight, his appetite was poor, and albumen was present in small proportion in his urine; casts were absent. He had then marked dyspnœa, which increased rapidly, until sleep could be obtained only in the upright position. There was no evidence of pulmonary trouble. With the forearms flexed to a right angle the brachial arteries became prominent at each impulse of the heart, the pulsation of the carotids was wavy and prolonged, the temporals were tortuous and visibly pulsated, no retinal arterial pulsation was seen. Retinal venous pulse was marked, but no venous pulsation was detected elsewhere. The left præcordial region was prominent. The apex-beat was most distinct in the sixth and seventh interspaces, on a perpendicular line running midway between the left nipple and anterior border of the left axilla. The heart's impulse was usually forcible and diffused, but at times it became weakened and wavy. In the second left intercostal space a systolic impulse was observed. The pulse varied from 80 to 120 per minute, struck the finger with considerable force, but at once lost most of its volume. All these phenomena were exaggerated by raising the hands above the head. The radial pulses were unequal, but the brachial arteries presented no differences. No hepatic pulsation was felt. The cardiac area of complete dulness was nearly twice its normal size, the increase being downward and to the left. Over the second right costo-sternal articulation the closure of the aortic valves was distinctly heard, and with this a slight diastolic murmur. A systolic murmur was also heard over the same spot. The systolic murmur was nearly lost in the carotid and subclavian arteries, but the diastolic one remained distinct. On a line with the second costal cartilage, over the sternum and to the left of this bone, the diastolic and systolic basic murmurs were most intense. Over the cartilage of the left fourth rib the murmurs heard at the base of the heart were less distinct, or were obscured by the development of other murmurs. In this situation, a short, sharp, presystolic murmur, apparently prolonged into a systolic one, was detected. At the apex and just above it the systolic murmur became intensified, its blowing character aiding in differentiating it from the short harsh murmur which immediately preceded it. From the fourth to the seventh rib, and from the sternum to a point about five or six inches to the left, a diastolic murmur of considerable intensity was heard. The character of the diastolic murmur over this area was different from that presented by the second-sound murmur at the base of the heart, and its intensity was much greater. Posteriorly, at the lower angle of the left scapula, a blowing systolic murmur, entirely deprived of its harsh, presystolic complication, was heard. Dr. Eskridge thought the physical signs justified him in venturing the diagnosis of constriction and regurgitation at the mitral orifice, a rare form of aortic regurgitation produced by the inability of one of the aortic semilunar valves to close, while the others acted properly, great hypertrophic dilatation of the left ventricle, and, to a less extent, of the left auricle, and aneurismal dilatation of one of the great vessels, probably of the pulmonary artery near its origin. The patient rapidly sank; œdema of the lower portion of the trunk and lower extremities, with effusion into the pericardium, pleuræ, and peritoneum, developed. He died, exhausted, in August, nearly two months after admission to the hospital.

Sectio cadaveris.—Brain.—Some venous congestion of the pia mater. The brain-substance and the ganglia nearly normal in appearance.

Thorax.—The pericardium was nearly filled with serum. The only evidences of inflammation were a few patches of recent lymph at the left and upper portion of the sac. The

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heart weighed eighteen ounces, the increased weight being chiefly due to eccentric hypertrophy of the left auricle and ventricle. The right ventricle was dilated, with slightly-thickened walls. The aortic valves were insufficient and thickened. The posterior leaflet was normal in shape, but the others curled upon themselves on the aortic side of the orifice. The stenosis was slight. The mitral orifice was button-hole-shaped, and the valves failed to close on account of calcareous deposits in their tissues, this degeneration also involving the inner surface of the left side of the auricle contiguous to the valves. The auricular surface of the valves was fairly smooth, but in the ventricle, just beyond the valves, and attached to them, hung a bony substance about one-eighth of an inch in diameter. The left auricular appendix was much hypertrophied. The valves at the tricuspid and pulmonary orifices were normal. The pulmonary artery was considerably dilated. The pleural cavities contained several ounces of serum. There were old adhesions at the apex of the right lung posteriorly, and at the same part of the left lung anteriorly. Several patches of recent lymph were also found at the lower part of the left pleural cavity.

Abdomen.—The peritoneal cavity contained considerable serum, and its veins were engorged. The liver was enlarged, with distended veins. The kidneys were highly congested. The spleen was double its normal size, and softened.

Abscess of the liver following arrested menstrual discharge; pyæmic abscesses of lungs and spleen; perforation of the bowel; severe heart-complications; death. Presented by Dr. J. T. ESKRIDGE.

M. D., æt. 28 years, was a factory-girl, whose father and two sisters had died from heart-disease. She had had two attacks of inflammatory rheumatism, but had never complained of heart-trouble. Her fatal illness began at night, by arrested menstrual flow and severe cramping abdominal pain, coming on after exposure to cold during the previous afternoon. Fever and pain in the right lower side of the abdomen continued for three days, when she was able to work again for about a week. Jaundice began early, was well marked during the first three weeks, was slight afterwards, but lasted until her death. Her symptoms three weeks after the beginning of the attack, when admitted into St. Mary's Hospital, in Dr. Hickman's wards, were great prostration, emaciation, loss of appetite, pain in the right inguinal and lumbar regions, and irregularly recurring chilly sensations. Two weeks later, when first seen by Dr. Eskridge, the liver-dulness extended nearly to the anterior superior spinous process of the ilium, and the normal tympanitic note of the right inguinal region of the abdomen was replaced by one bordering on dulness. The tenderness was so great that neither fluctuation nor a tumor could be detected, if such existed. Great tympany soon developed and obscured the physical signs. A pyæmic condition, from which the patient perished in about two weeks, now set in, attended by chills, fever, sweating, low temperature, and diarrhœa. A few days before death she passed considerable pus by the bowels. The surface-temperature taken over the chest and abdomen showed the latter to be about two degrees warmer than the former, but all parts of the abdomen were of nearly the same temperature. Stenosis of the aortic and mitral orifices, with insufficiency of the valves of the latter, and a dilated hypertrophy of the left auricle and ventricle, were recognized during life.

The post-mortem examination revealed the diagnosed lesions of the heart, and demonstrated the possibility of visible left auricular pulsation. The liver weighed eighty ounces (the right lobe being alone enlarged), and contained a large abscess, surrounded by several smaller ones, with which it was connected. The cæcum and its appendix were surrounded by about six ounces of pus, the latter being circumscribed by adhesions. Two openings were found in the black and gangrenous cæcum, one where its appendix had sloughed off, the other due to perforation of the bowel by the pus. The portion of the liver external to the hepatic abscess was firmly adherent to the abdominal wall, and from this point (about two inches above the crest of the ilium) the pus had burrowed its way and formed a sinus leading to the right inguinal region under Poupart's ligament. A direct communication between the liver-abscess and the accumulation of pus surrounding the cæcum was seen.

Dr. ESKRIDGE thought that the demonstration of the possibility of visible left auricular pulsation in the second left intercostal space, and of the occurrence of a functional murmur in the pulmonary artery without dilatation of that vessel, was worthy of notice at present, as Dr. Broadbent had so recently advocated views almost diametrically opposite. Dr. Eskridge considered mitral stenosis of not infrequent occurrence, and said that, with care, the mitral presystolic murmur was not usually difficult to detect. The four physicians, including himself, present at the autopsy then thought that the hepatic abscess was secondary to the inflammation and suppuration around the appendix and cæcum; but he, after carefully analyzing the clinical evidence and pathological lesions in favor of each condition, was satisfied that the case began as one of primary abscess of the liver following exposure to cold while the patient was menstruating.

The discussion on both the preceding specimens, which presented somewhat similar heart-lesions, was now opened.

Dr. J. C. WILSON said that there was one

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point of special clinical interest in Dr. Eskridge's case,—viz., the chronology of the lesions. He thought that the extensive multiple abscesses of the liver and lungs were secondary to the abscess around the caput coli. In some cases the determination of the primary source of the emboli was difficult, but in this case it was perfectly clear.

Dr. BRUEN said that he would like to go on record among those who had observed auricular pulsation in cases of mitral obstruction in which the stenosis was extreme.

Dr. NANCREDE remarked that in his experience flexion of the thigh on the abdomen was an almost invariably early symptom in cases of perityphlitis, from which he would infer that, as this thigh-flexion did not occur in Dr. Eskridge's case until within ten days of the fatal termination of the case, the pericæcal abscess was secondary to that in the liver.

Dr. TYSON said that he had been much impressed with the marked increase of the surface-temperature in the neighborhood of the abdominal abscesses as compared with the general body-temperature. As to the chronology of the various affections, he was inclined to believe that Dr. Wilson was correct.

Dr. ESKRIDGE said, in reply to Dr. Wilson, that he could appreciate how the perityphlitis might be mistaken for the primary trouble, and the hepatic suppuration for the secondary: such a mistake (for he felt certain that the abscess of the liver was the primary affection) was made by all, including himself, who were present at the post-mortem examination. The pathological and clinical facts in favor of primary hepatic abscess were given at some length in his remarks in connection with the presentation of the specimens. In brief, the clinical features were as follows: deep and early jaundice following exposure to cold, pain in the right side of the abdomen, attended by fever and gastric irritability of a few days' duration; an intermission of a week, during which she was able to work, followed, after which gradually increasing weakness, with dull abdominal pain attended by loss of flesh and appetite, confined her to bed; ten days before death the development of intense tympany, associated with flexion of the right thigh upon the abdomen. The hepatic suppuration was confined to the right side of the right lobe, all the smaller abscesses directly communicating with the large one, and the left lobe of the liver being apparently healthy.

Tongue and larynx from a case of elephantiasis Græcorum. Presented by Dr. A. C. W. BEECHER.

The case from which these specimens were removed was reported in the *Photographic Review of Medicine and Surgery*, No. 6, vol. i., August, 1871. Mr. ——, æt. 26 years, born in Cuba, of Spanish parents, married. His father was living when the patient died in 1872; the mother died when he was an infant. He was wet-nursed by a colored house-servant, who was single but had had several children by different individuals. She was healthy so far as known, with the exception of sores upon her feet. He had none of the diseases of early life, except measles and mumps. His health was good up to fifteen years of age, when superficial yellowish-pink spots appeared upon his body, but unaccompanied by pain or itching. They remained about one year, and disappeared during a voyage to Spain. While there, he was attacked with neuralgia of the little fingers, extending along the course of the ulnar nerves to the elbow, which was relieved, and he returned to the West Indies. Six months after his return he experienced a second attack, which lasted for one month. In 1862 he came to this country to study, and after one year became the subject of repeated catarrhs, chiefly affecting the throat. Itching of both forearms and legs soon after developed. In 1866 œdema of the hands and feet, which did not extend beyond the wrist or ankle, set in, producing a sensation of stiffness of the fingers and toes. Blebs then suddenly appeared in varying size upon the dorsum of the hands and fingers, extending over the whole length of the latter. At times a sharp pain in the hands and fingers, arousing him from sleep, would herald one of these bullous attacks. The bullæ contained a whitish opaque fluid, and when burst were succeeded by dark-brown scabs transversely cracked and fissured over the joints. Under these crusts were excavated ulcers. The finger-tips and the ends of the toes presented similar ulcers, over which the nails grew, and these latter being brittle broke off when long. Next frequent hemorrhages from the nose, coming on while laughing or in mental or physical excitement, were noted. The nose became tender, was much swollen, and discharged moderately offensive pus, and the bridge of the nose began to sink, gradually assuming its appearance in the photograph here shown. A year after the hands were attacked, the face became similarly affected, the ulcers on healing leaving distinct cicatrices. The eruption never entirely ceased, new bullæ and ulcers forming while others healed. There was marked emaciation, with absence, in many spots on the body, of the hair, which was everywhere scanty, and the skin was of a dusky hue. The muscles of the arms were much wasted, and the skin presented small white cicatrices. Over both patella and olecranon processes large, hard, firm, reddish nodules were seen. The hands were much deformed, with wasted, contracted fingers, having numerous small hard tubercles scattered beneath the skin of the dorsum of the hands. Numerous ulcers, mostly covered

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with irregular black scabs, covered the backs of the fingers. A markedly varicose condition of the veins near the wrist was observed. The hair of the head was normal in quantity, but was hard and harsh, while there was total loss of eyelashes and eyebrows, and the beard was scanty. There was a large hard tubercle over one frontal boss, near which was an old ulcer. The nose was much sunken; there was an ulcer of the right zygoma, covered by a black rupial-like scab; the face was marked with scars, and the ears were likewise deformed, with traces of numerous cicatrices. Many of the teeth were decayed and broken off close to the gums. The tongue was much thickened, with greatly-enlarged papillæ. The velum palati was almost gone from ulceration, and yellowish-white tubercles existed in the pillars of the fauces. The larynx was much contracted by thickening of its mucous membrane. The epiglottis was about twice its normal thickness, and had several well-marked tubercles upon it. The voice was much impaired, weak, and had a peculiar husky sound. There were deep sloughing ulcers over each tendo Achillis. Tactile sense was very much impaired, as in the dorsum of the hands, where the sense of touch was almost absent, and what was recognized was referred to some point in the neighborhood of the point of contact. The sense of pain was almost entirely absent in the hands and forearms, becoming more marked as the body was approached: a pin passed through the pulp of the middle finger gave absolutely no pain. The difference between very hot water and that of an ordinary temperature was readily perceived: moreover, there was general increased cutaneous sensibility to temperature-changes. Taste and smell were somewhat impaired. Very slight anæsthesia of the trunk existed. Sight was good, although prolonged use of the eyes was painful. The general health of the patient was fair. There seemed to be no trace of venereal disease. Sexual power was absent. Frequent neuralgic pains of the legs and arms were complained of. The atrophy of the hands, feet, fingers, and toes was appreciable from month to month. The cornea next became ulcerated, the conjunctival surfaces became adherent, and almost total blindness ensued. Swallowing was almost impossible towards the last, owing to the pain produced by the throat-ulcers, and because from imperfect closure of the rima glottidis fragments of food entered the larynx, producing violent and exhaustive coughing. Respiration was also so much impeded that he died October 29, 1872, partly from dyspnœa, partly from starvation. Before death he suffered intensely.

Autopsy.—Rigor mortis well marked. Great emaciation of the entire body noted. The surface of the tongue was fissured, the papillæ enlarged, with the remains of tubercles well marked towards its base. The epiglottis was curved on its long diameter, thickened and stift, with its upper margin eroded by a large ulcer. A deep ulcer was situated in the mucous membrane near the apex of the left greater cornua of the hyoid bone. Narrowing, from thickening of tissues, involved the trachea at its upper part, and produced such stenosis of the chink of the glottis that an ordinary quill could not be passed between the vocal cords. Upon section of both ulnar nerves near the elbow, extensive degeneration was detected.

This case was examined both by Dr. Duhring and by Dr. R. M. Bertholet,—the latter making a laryngoscopic examination,—who both considered it to be of the mixed variety,—viz., tubercular and anæsthetic leprosy. The case is interesting both from its rarity and the possibility of other cases being brought here from California and New Brunswick, in both of which places it is not uncommon. Again, its resemblance to syphilis at first led me into error, although I recognized something strange about the disease. The late Dr. Maury saw the case with me, and had no doubt of its syphilitic nature until Dr. Duhring's examination convinced him that it was really leprosy. Erasmus Wilson says, "The resemblance to secondary syphilis is so striking that an error is certain, excepting on the part of those who have had an opportunity of seeing and observing leprosy."

Dr. WILSON asked whether the family history had been investigated.

Dr. BEECHER replied that he carefully questioned all concerned, but had ascertained nothing special, except that when such cases occurred in wealthy families the fact was always hushed up.

Dr. WILSON said that in this connection he would call the attention of the members to a very able article in the last issue of the *American Journal of the Medical Sciences* (by Prof. White, of Harvard), where the writer took the view that leprosy was contagious, maintaining that it should be investigated where it was of rare and recent occurrence. Dr. Wilson also referred to its occurrence among recent immigrants in certain of our Northwestern States.

Dr. CARL SEILER said that Dr. Beecher had asked him to examine the specimens of the larynx and tongue of the case of elephantiasis. The dorsum of the tongue was deeply furred, and the papillæ appeared enlarged. The epiglottis was thickened, very stiff, and rolled on its long axis like a dry leaf. On its upper free margin was a crescentic ulcer, with raised edges, and numerous smaller roundish ulcers were scattered over the laryngeal surface of the epiglottis. Extensive ulceration of both ventricular bands and vocal cords existed, so that the opening of the ventricles was almost entirely occluded. The ulcers were symmetrical, and most marked towards the anterior insertion of the vocal cords. About one-quarter of an inch below the cords was a

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cicatricial band projecting from the sides of the subglottic cavity, and leaving an elliptical opening, through which a crow-quill could hardly be passed. Below this obstruction the mucous membrane of the subglottic cavity was studded with small round ulcers, while the trachea seemed healthy. No further lesions could be detected by the naked eye, although doubtless such had existed, but had been obscured owing to long preservation in alcohol. Dr. Seiler regretted the absence of the records of the laryngoscopic examination made before the patient's death: still, the lesions seen in the specimen would explain the symptoms of dyspnœa, aphonia, and dysphagia, and it was astonishing how the patient could have respired at all through the narrow opening left by the cicatricial tissue below the glottis. The chief interest, however, centred in the great similarity of the lesions in this unique case with those found in syphilis and lupus of the larynx. He had seen ulcerations in syphilitic laryngitis almost identical in form and location with those seen in the specimen, and he remembered having seen two or three specimens of lupus of the larynx when in Vienna which bore a strong resemblance to syphilis. Lupus and leprosy of the larynx could not be diagnosed from each other by laryngoscopic examination alone, but other signs and symptoms, outside of the larynx, had to aid in the diagnosis. Thus, in syphilitic laryngitis there were always sharply-defined bands of a deep-red color on the free margin of the velum palati. In lupus, affections of the skin of some part of the body always preceded, coexisted with, or shortly followed the manifestations of the disease in the larynx, while in leprosy the larynx was usually attacked later in the disease, when other portions of the body clearly showed marks of the pest.

Dr. LITTLE remarked that, having conversed with Dr. F. N. Enders, who had seen a great many cases of leprosy in the Sandwich Islands, he had been interested to note that the eyelids were affected in the early stages, ectropion resulting, and the conjunctiva and cornea, or even the whole eyeball, becoming involved. The affection of the eyelid is sometimes the first symptom, or occurs during the first or second year of the disease. The lids were involved in the case described, and the eyeballs subsequently.

Dilatation and atheroma of the pulmonary artery, with an opening through the interventricular septum. Presented by DR. BRUEN.

Examination of the heart.—Left side: slight ventricular hypertrophy; mitral valves somewhat thickened at their margins, with roughening of their auricular aspect; valves competent; the left auricle is normal, as are also the aorta and the aortic valves. Examination of the right side is of most interest. Two of the semilunar leaflets at the mouth of the pulmonary artery are nearly destroyed by atheromatous changes; the third segment is much thickened, and projects as a leaf-like fold, roughening the mouth of the pulmonary artery. This vessel is dilated to nearly twice its normal size, forming really an aneurismal dilatation. The vessel-walls are covered with a fringe of vegetations of inflammatory origin or due to atheromatous changes. The right auricle is very small and imperfectly developed, the bulk of its cavity being formed by the auricular appendix. The tricuspid valves are much thickened, but are competent, probably. Between the two ventricles is an orifice large enough to admit the forefinger. It is directly beneath one of the tricuspid leaflets, and is lined with endocardium, and must have allowed a free interchange between the blood of the two ventricles. The walls of the right ventricle are thinned, and its cavity somewhat dilated. Dr. Bruen said that this case was interesting because perforation of the ventricular septum is often congenital and dependent on obstruction of the orifice of the pulmonary artery, the perforation being due to the pressure of blood within the replete right ventricle. This pressure causes an arrest in the development of the ventricular septum. The pathology of the present case probably is as given above; but there was no pulmonary-artery obstruction. A similar case is recorded in the *Medico-Chirurgical Transactions*, vol. xv., by Fletcher. (2) There was no cyanosis. Cyanosis is usually dependent on a deficiency of cardiac evolution, or else on retarded evolution of the pulmonary artery or aorta. As a consequence, there is deficient cardiac power to carry on the circulation; or the pulmonary artery or the aorta is narrower than normal, so that in any of these conditions venous repletion results, and cyanosis. Admixture of the venous and arterial blood is, then, not the usual cause of cyanosis, although it may be a factor. Walsh says, "Grant that perforation of the ventricular septum coexist with contraction of the pulmonary-artery orifice, and cyanosis seems to become a certainty." In our case there is an example of incomplete development of the ventricular septum and deficient development of the right auricle, without cyanosis. (3) Pulmonary-artery disease is consistent with a fair amount of general health, and that compensation by the right heart may occur, just as in cases of aortic disease. (4) Descriptions of pulmonary-artery disease call attention to bronchitis, pneumonia, and hydrothorax, as sequential states. In our case no such complications were present until just before death, when she finally succumbed to congestion of the lungs, added to the cardiac state. (5) The aneurism of the pulmonary artery formed a pulsating tumor on the left side of the sternum, between the second and fourth ribs, extending outward from the border of the sternum, and including an area

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covered by a trade-dollar. (6) Over the tumor a post-diastolic and a presystolic bruit-like murmur could be heard at a point between the second and fourth ribs, while close to their junction with the sternum a hoarse systolic murmur could be heard. The bruit was localized; the heart systolic murmur was carried out into the entire arterial system.

Dr. BRUEN then detailed at length the differential diagnosis of these murmurs. During life, dilatation of the pulmonary artery, with mitral obstruction, had been the diagnosis. The patient was a woman, æt. 24 years, a syphilitic, and was under observation from November, 1878, to July, 1882.

Dr. ESKRIDGE had not had any difficulty in differentiating a presystolic from a diastolic murmur. He thought the leathery thickening of the mitral valves in the specimen presented by Dr. Bruen was sufficient to give rise to a mitral presystolic murmur. If we adopt the theory of Dr. Austin Flint, Sr., that a mitral presystolic murmur may occur in aortic regurgitation when the mitral valves are perfectly healthy, it seemed to him that there was no difficulty in accounting for the presystolic murmur from the regurgitant blood from the pulmonary artery into the communicating right and left ventricles of this case, especially as thickening, loss of elasticity, and some rigidity of the mitral valves existed. The chronometry of the pulsation that occurred in the left second intercostal space he thought could have been obtained by adopting Sanson's modification of Balfour's method of comparing the time of the occurrence of the præcordial pulsations.

Dr. SHAKESPEARE said that he had been struck with one point of great interest in connection with inflammation of the lining coat of the pulmonary artery, as evinced by the vegetations. These growths are very rarely found in the venous current. He had certainly never seen any other specimen, although he did not doubt that some had been seen or reported by other observers. Arterial blood seemed a requisite for the evolution of such diseased action. Evidently, the site of the perforation, being just below the aortic and pulmonary valves, brought about just this necessary prerequisite,—viz., free admixture of arterial blood with the venous.

Dr. WILSON called attention to the evident relation between the incomplete ventricular septum and the condition of the pulmonary artery, which is greatly dilated and atheromatous and presents the appearances often met with in the aorta, very rarely in this vessel. The wall of the right heart is relatively thickened. This fact, together with the position of the opening in the interventricular wall, which favors the flow of the blood from the left ventricle towards the pulmonary artery, renders it probable—almost certain—that the more forcible contraction of the left heart has constantly forced a portion of its arterial blood into the right heart, thus increasing the current entering the pulmonary artery, and occasioning, first, hypertrophy of the right ventricle, and, second, a subacute inflammatory process in the pulmonary artery itself, in consequence of the increased volume and force of the blood-current. Dr. Shakespeare's observation that such growths as are here seen require for their existence arterial blood is in accordance with this view.

Sarcoma of the prostate gland. Presented by Dr. W. H. HUGHES.

W. G., aged 35 years, was admitted to the University Hospital, under the care of Dr. H. R. Wharton, suffering from retention of urine. Before his admission, numerous unsuccessful attempts had been made to empty the bladder by means of a catheter. On admission, the patient complained of much pain in the hypogastric region, which was the seat of a smooth, rounded swelling reaching almost to the umbilicus. He stated that he had gonorrhœa some years previously, which had been followed by a troublesome stricture, which had been perfectly relieved by the passage of bougies. For more than a year previous to his admission he had suffered at irregular intervals from difficulty in urination. The urine had never been bloody, but its passage had often been attended by great pain. It was found impossible, on account of numerous false passages, to introduce a catheter into the bladder. On introducing a finger into the rectum, the prostate was felt smooth, rounded, and imnensely enlarged. The patient was put to bed, ordered suppositories of belladonna and opium, and to have a warm poultice applied to the abdomen. This treatment relieved him almost immediately, and urination became freer. For a few days he did well, but the difficulty in urination soon began to increase, and by the fifth day after his admission the symptoms had become so urgent that it was deemed advisable to repeat the attempt to pass a catheter. This attempt was as futile as the first. Then aspiration of the bladder through the abdominal walls was attempted, but only a small quantity of blood was obtained. In introducing the canula it gave the sensation of passing into a solid body; and careful palpation revealed the fact that there really was a solid body apparently occupying the whole bladder. It was now decided to open the urethra at the base of the bladder through the perineum, and the operation known as Cock's was selected. The operation was followed by the escape of a small amount of urine. After this the patient did well, with the exception of an attack of dysentery, until the ninth day after the operation, when peritonitis suddenly developed. He died on the following day.

Autopsy, two hours after death.—Upon opening the abdomen, a thick, yellowish-red, purulent liquid, having a urinous odor, was

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found bathing the intestines, the coils of which were everywhere bound together by recent adhesions. The omentum was in places firmly adherent to the intestines, and contained numerous irregular nodulated masses, varying in size from that of a pea to that of a hen's egg. These masses, on section, presented a whitish-yellow color. In the lower part of the abdominal cavity was a large, irregularly-shaped tumor, firmly adherent to the small intestines, colon, omentum, and walls of the pelvis. On careful dissection, the tumor was found to originate in the prostate gland. On section, it presented in parts the characteristics of scirrhus, in others those of encephaloid; in other places there were large loculi, with reddened, irregular, friable walls filled with a liquid similar to that found in the abdominal cavity, though no connection between these loculi and the abdominal cavity could be found. No trace of normal prostate gland nor seminal vesicles could be discovered. The bladder, containing a few ounces of urine, was found in front of the upper portion of the growth, its upper boundary almost on a line with the umbilicus. The anterior wall was apparently perfectly normal; its posterior wall, resting on the tumor, was thickened, raised, red, and velvety. The ureters were normal and opened in the usual position. The urethra, as far as could be seen, ran along the anterior surface of the tumor, and was not involved by it. The weight of the growth was five pounds two ounces. The kidneys, stomach, lungs, and intestines were normal. The peritoneum and capsules of the liver and spleen contained several secondary growths. The brain was not examined. Microscopical examination showed the growth to be a typical small round-celled sarcoma. The secondary deposits were similar in structure to the primary growth. The submucous and muscular tissues of the bladder-walls were somewhat infiltrated. The growths in the capsules of the liver and spleen had commenced to penetrate those organs.

Melanotic sarcoma of orbit, with metastases to liver, etc. Presented by Dr. SHAKESPEARE.

The patient was an elderly woman, who had been operated upon by Dr. Heyl, at the Episcopal Hospital, some six months before death, the whole contents of the orbit having been then thoroughly removed. Recurrence took place, the cavity being filled with a black fungating mass; the left nostril gave vent to a blackish discharge, and the various internal organs became involved, notably the liver. Death took place from exhaustion. Most of the metastases are entirely melanotic, but some in the liver show at their periphery a distinct whitish zone. Dr. Shakespeare remarked upon the singular fact that orbital growths were usually melanotic, although they might not spring from the choroid coat of the eye, as in this case, where all pigmented structures had been removed months ago.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

A CONVERSATIONAL meeting of the Society was held at the hall of the Society, November 8, 1882.

DISCUSSION ON DR. PARISH'S PAPER.

Dr. William T. Taylor said that he had, during the earlier years of his practice, been afraid to introduce the hand into the uterus; it was considered dangerous; for it was a kind of *noli me tangere*, whose cavity must not be invaded. He had, however, changed his mind, and now regarded the hand as really the first thing which was commonly "on hand" for use in post-partum hemorrhage and other troubles. For, if the child had recently passed through the os uteri, it was not generally so much contracted but that the hand could be conveniently and carefully introduced in order to remove the cause of the hemorrhage, clots, etc., and then, by pressure externally, the uterus will contract and expel the hand, when the hemorrhage will cease.

Dr. Ludlow inquired whether Monsel's solution produced a true coagulation. He thought it was rather a carbonization. He would like Dr. Smith to state whether he knew of any death resulting from the use of the iron hæmostatics, particularly Monsel's solution, the only one he had used. He had been one of the first to use Monsel's solution in these cases, and had used it often, by means of a special instrument of his own make, there being no other at that time to be had, and never had any trouble. Dr. Parish himself, in the paper, had spoken of it as a last resort. Why last resort? He recalled a case where a patient had been bleeding for some time, and in which ergot, ice, and other methods had failed. He had never used Monsel's salt in so recent a case before (this, it must be noted, was before hot water was suggested), but he used it here with success. He would not use it always, of course, but was not afraid of the kind of coagulation produced, which he believed to be a direct chemical change by the hæmostatic upon the blood. Our chemists can soon determine this. Besides, by the most of means used coagulation is produced.

Dr. Ludlow said that he was aware that deaths had occurred from the use of Monsel's salt, but he had referred in his question only to its use, as Dr. Barnes had advised, after the uterus had been emptied. It was only under such circumstances he used it. He very soon found that it would not permanently stop the flowing of blood when even the small papilloma, not larger than a usual wart, existed in the uterus. The abuse of an article, or

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a wrong mode of using it, or the unskilful performance of an operation, is no argument at all against its proper use He advised Dr. Smith to try the iron hæmostatics and report the result. Dr. Ludlow said that he could detail numerous cases of hemorrhage controlled by iron hæmostatics when every other means had failed. It is dirty, undoubtedly; but that can be no objection when life is involved.

Dr. Wm. S. Stewart was an advocate of the use of iron. He had not seen any bad results from it. He never allowed the clots to remain, but as soon as the patient had reacted he removed the clot and syringed the uterine cavity, repeating this latter operation for several days. He was glad to learn that this system of syringing had been adopted at the Woman's Hospital. The use of iron and hot water will be rarely necessary if labor is properly conducted and not hastened; but no clots or shreds must be allowed to remain. If we carelessly pass over these, we will have profuse hemorrhage, which will require strong treatment. We should explore the uterus thoroughly, examining to the fundus. If the nails are trimmed and the hands clean, no injury will be done. He had sometimes been obliged actually to scrape off the placenta, but had seen no harm result.

Dr. Hewson had recently seen Dr. J. Marion Sims perform the operation of incision of the os uteri, and, suspecting that the circular vessels might be wounded, Dr. Sims had used cotton saturated with dilute tincture of chloride of iron, one part to four, and packed it well into the vagina, back of the cervix. The application was considered on the occasion by Dr. Sims the best antiseptic and styptic.

Dr. Blackwood agreed with Dr. Parish's advice to retain the placenta fifteen or twenty minutes. He thought that the vessels of the placental site are filled with clots. He had made a post-mortem examination of the body of a woman who had died of pulmonary hemorrhage just after the third stage of labor, and he had found the uterine vessels filled with clots. He did not think that the hand. if carefully introduced into the uterine cavity, could do harm. He often did it, placing the other hand at the same time on the abdomen. In treating hemorrhage, he had used vinegar and lemon-juice, but did not like ice. Hot water is the remedy, but in one case he had seen decided shock from its use. He did not believe in iron.

Dr. Welch thought that Dr. Parish had overestimated the danger of introducing the hand into the uterus, which is always greatly relaxed and offers but little resistance to such introduction. It is necessary to insert the hand in order to discover the cause of the hemorrhage. If it results from laceration, that condition can be recognized, and if the uterus contain clots we can turn them out. The late Dr. Charles D. Meigs used to insist upon this both in his lectures and his writings. Dr. Welch wished to emphasize the advantage in the use of vinegar. He had seen a case of post-partum hemorrhage in which the bleeding had been very extensive; the color of the lips had even been lost, and the patient could only speak in a whisper. The hand was introduced and the clots turned out, but this did no good. Ice was also used, without effect. The patient was so far gone that she did not even feel the ice within the uterus. A clean white rag was saturated with vinegar and introduced, and in an instant the uterus contracted. The patient rallied, and no further hemorrhage occurred.

NEW YORK COUNTY MEDICAL SOCIETY.

NOVEMBER 27, 1882.

DR. A. JACOBI, as an appointed committee of one, reported strongly in favor of extending the summer vacation for the public schools in the city of New York from the 1st of July until the second week in September. The report was adopted by the Society.

The outgoing President, Dr. F. R. STURGIS, in the course of some remarks, spoke of the successful prosecution, under the new statute, of certain unlawful practitioners in this city, thanked the Society for the courtesies and honor which it had extended to him, and introduced the incoming President, Dr. DAVID WEBSTER.

"Malaria in Children" constituted the title of the scientific paper of the evening, which was read by its author, Dr. L. EMMET HOLT.

The peculiar manifestations of malaria in children was a study which had been much neglected. Many foreign text-books on the diseases of children did not even allude to malaria. Symptoms apparently peculiar to the digestive and the respiratory systems in children were so often present in various affections—among others, that of malaria—that a correct diagnosis was liable to be overlooked. Again, malaria occurring in children often manifested itself so insidiously that the physician's attention might not be called to it until after it had made considerable progress. The author would confine himself to a consideration of the symptomatology and the diagnosis of this affection. The etiology, the pathology, and the treatment did not differ materially from the same in adults.

He would speak principally from experience derived from observation of one hundred and eighty-four cases, most of which were seen at the Northwestern Dispensary, in this city.

Many of the abrupt cases presented symptoms of vomiting, drowsiness, prostration, fever, severe pain in the epigastrium, etc., and on examination there would be found enlargement of the spleen, often tenderness, and occasionally there was also tenderness over

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the hepatic region. In cases commencing less abruptly there was usually headache, generally frontal, muscular weakness, anorexia, constipation or diarrhœa, pallor of the face, a dark line under the eyes, nausea, with occasional vomiting, tongue heavily furred, epigastric pain, the patient hot and chilly by spells. Periodicity could not be relied upon to any great extent in diagnosis. A positive chill was present only in a minority of the cases, and then in the patients most advanced in years. Nearly all of the cases observed were under eight years of age. Fever was one of the most important and constant of all the symptoms. There were very few cases in which close observation did not show some rise of temperature, as indicated by the thermometer, at some period during the twenty-four hours. The fever had variations as in the adult, and in general fell under one of three groups: first, cases in which the temperature rose quite high at the onset, remaining so with very little variation for twenty-four, forty-eight, or even seventy-two hours, then assuming a remittent type; second, cases in which the fever at first was slight, gradually increasing in intensity, showing less a periodic character, perhaps finally becoming almost continuous, not going above 103° F.; third, cases in which the fever was distinctly remittent or intermittent from the onset of the disease. The author believed that the general impression was that the temperature rose higher than clinical observation proved to be the fact. He had seen but three cases in which it went above 106° F. The usual range of temperature was from 101° to 103° F. Sweating occurred in a little more than one-fourth of the cases, and was more constant than the cold stage. It made its appearance later and was much less marked than in adults. Cerebral symptoms of some kind were manifest in most of the cases; usually there was frontal headache. There might be simply stupor or sleepiness, most frequently at the time corresponding to a paroxysm. Convulsions occurred in four cases and were repeated in two. All terminated favorably. Vertigo was noticed only in three cases. Pain at the epigastrium occurred in most of the cases. In about one-third it was said to be severe, and it seemed to have no relation to the taking of food. The author believed it to be neuralgic and dependent upon congestion of the stomach. Pain was less frequently present at the splenic and hepatic regions. There might also be pain and soreness in other regions of the body. Splenic enlargement was usually present, and in children commonly took place in a direction upward and backward, and was, therefore, liable to be overlooked. Enlargement of the liver was much less marked and less constant than enlargement of the spleen. Disturbance of digestion was almost uniformly present. There was vomiting in many cases, occurring often at the onset of the paroxysm. The tongue was commonly coated, and its clearing up was one of the surest signs of recovery. Constipation was present in many of the older patients, while diarrhœa might be present in the younger. Bronchial catarrh and pneumonic symptoms might be present. In six cases there was incontinence of urine, in six painful micturition, and in a less number retention.

The complications of malaria in children might be divided into three groups,—those related to the respiratory system, to the gastro-intestinal system, and to the nervous system. The frequency of respiratory and gastro-intestinal complications might be explained by the fact that the malarial poison was supposed to find access to the body by either of those channels; but the author thought the more probable explanation was the fact that these were the most vulnerable portions of the child's organism. Bronchitis was perhaps the most frequent of all the complications, and it might be present in both the acute and the subacute cases. It might lead to pneumonia. He believed that some cases presenting nearly or quite all of the symptoms together with the physical signs of pneumonia, and mistaken for such, proved to be cases of simple malaria. Such symptoms, if the cases were malarial, disappeared under the administration of quinine. Gastro-intestinal complications had been mentioned in the symptomatology. The sensory system was more frequently disturbed than the motor. Various spasmodic disorders had been observed. Cases had been recorded of torticollis. He had seen epilepsy and chorea. There were disorders of micturition in fifteen cases; in two there was nephritis; in three there was vaginitis, which seemed to be due indirectly to general debility induced by malarial poison; there was hemorrhage from the gums in two cases, epistaxis in one, tonsillitis in two. Relapses were more likely to occur in children than in adults.

No single symptom could be relied upon in the diagnosis of malaria in children. Perhaps the most important one, when taken in connection with certain other symptoms which have already been mentioned, was enlargement of the spleen. Too much dependence should not be put upon the presence or absence of periodicity. The disease with which malaria in children was most likely to be confounded was typhoid fever. In certain cases the course of the temperature seemed to be the only means of distinguishing between the two affections. A normal morning temperature after the third day almost certainly excluded typhoid fever.

The discussion was opened by Dr. J. Lewis Smith, who said that he had seen a great many such cases in private practice in the part of the city where most of Dr. Holt's patients had lived. He thought cases of

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malaria might properly be divided into two classes,—those which were due to marsh miasm, and those which were of a remittent character and due to a polluted soil or sewer-gas. He believed that the majority of these cases apparently of malaria in children were really cases of typhoid fever. The latter disease occurring in children presented very different symptoms from what it did when it occurred in adults. The symptom of tenderness on pressure over the abdomen, to which the author of the paper had alluded, was present in many cases over the inner side of the thigh also. In the cases of typhoid fever, he found that the symptoms, although they might be mild, would run on for twenty to thirty days, in spite of the administration of quinine. Some cases, however, did not continue longer than a week. He preferred to call them cases of remittent fever rather than malarial fever, as the former term would not commit us with regard to the essential nature of the disease. It was so spoken of by Dr. West, of London, who also believed that it was really typhoid fever. There was not usually diarrhœa, for the reason that there was not the same degree of intestinal catarrh that occurred in the cases of typhoid fever in the adult. Certain cases were cited in illustration of the typhoid character of the disease, as indicated by its affecting several in a family or hospital ward.

Dr. JOHN C. PETERS said there was great difficulty in diagnosing malarial fever in children under five years of age; above that age it was much easier. Certainly, some cases of ordinary remittent fever due to sewer-gas poisoning simulated malarial fever closely. He knew of several cases in which the paroxysms were distinctly intermittent in type, and the only possibility of malarial poisoning was through sewer-gas. He had known cases to occur in children immediately after birth. He also mentioned an instance in which the convulsions were exceedingly persistent, continuing at intervals for three days.

Dr. FRUITNIGHT thought malaria was evidently toxæmic, and was more likely to be introduced into the body through the respiratory or the digestive system than by other ways. Being toxæmic, its effects were manifested more particularly upon the nervous system, either in a sthenic or an asthenic manner. Diseases which began with a chill in the adult usually began with a convulsion in children. By the administration of quinine, the convulsions, which corresponded to the period of chill in the adult, were relieved. He asked if the bronchitis, laryngitis, etc., might not be due to general sluggishness of the circulation, causing stasis in various organs of the body.

SORE NIPPLES.—Fissured and tender nipples may be protected by painting them with gutta-percha dissolved in chloroform.

REVIEWS AND BOOK NOTICES.

RHEUMATISM, GOUT, AND SOME ALLIED DISORDERS. By MORRIS LONGSTRETH, M.D. Wm. Wood & Co., New York, 1882.

An encyclopædia or a treatise on one of the principal divisions of medical literature—for example, medicine, surgery, or obstetrics—may appear in response to a distinct local or general demand, but there should be only one object in writing a monograph,—the dissemination of new ideas. Temptation to depart from this rule has probably often occurred, for the greatest delineator of human nature has written,—

> "Perseverance . . . keeps honor bright.
> To have done, is to hang,
> Quite out of fashion, like a rusty nail,
> In monumental mockery. . . .
> For emulation hath a thousand sons,
> That one by one pursue; if you give way,
> Or hedge aside from the direct forthright,
> Like to an entered tide, they all rush by,
> And leave you hindmost."

Painstaking care, thoroughness in attention to detail, and good judgment are conspicuous all through this work; but we do not recognize the terse clearness, with individuality, which is calculated to attract attention to a new description of a disease so widely disseminated and so imperfectly understood as rheumatism.

At the same time, the volume has a *raison d'être*, since it is encyclopædic in its completeness. Certain sections are most excellent,—for instance, those upon the pathology and morbid anatomy of the processes engendered by rheumatism. The clinical descriptions of endocarditis and cerebral rheumatism are disappointing, because too didactic.

The chapter on treatment is brief, although all methods receive mention. The treatment with bromide of ammonium is endorsed in the following terms: "After becoming familiar with its effects in rheumatism generally, it becomes comparatively easy to recognize, without perhaps being able to define or portray, the class of cases in which the remedy is likely to be useful and successful" (p. 204). Perhaps this sentence will not unfairly represent the tone pervading the entire chapter. The volume concludes with a description of gout. This disease is a *bête noire* of the medical man,—the vaunt of the quack. Since we so imperfectly comprehend the *action of alteratives*, possibly the author is discreet in devoting only six pages to the treatment of this disease. E. T. B.

NITRO-GLYCERINE AS A REMEDY FOR ANGINA PECTORIS. By WILLIAM MORRELL, M.D., M.R.C.P. Detroit, Michigan, 1882. Pp. 78.

The nitrites being but recent acquisitions to the materia medica, and certain of them having proved of such utility in the treatment of

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one of the most painful and distressing of maladies, it is evident that a work on the above subject from the pen of so careful an observer as Dr. Morrell must be of particular interest.

In this very interesting and valuable *brochure* the author gives a synopsis of the physiological action of nitro-glycerine on the lower animals and man, and makes note of the similarity of its action and that of the amyl salt. A number of cases are cited in which nitroglycerine was used, and which, we may parenthetically add, no one can review without feeling assured of its extraordinary efficacy in angina. Some very interesting facts connected with its administration are shown in its apparent safety in cases where considerable cardiac lesion existed, and in the varying susceptibility of different patients to its influence. In one of the above cases a one-half minim dose of a one-per-cent. alcoholic solution produced decided effects, while another case could take one hundred minims.

E. T. B.

GLEANINGS FROM EXCHANGES.

REMOVAL OF THE STERNUM.—In the Surgical Section of the German Association, recently meeting at Eisenach (*Allg. Wien. Med. Zeitung*, September 25), Prof. König, of Göttingen, related a case of the total removal of the sternum, which he regarded as unique. A lady had been under the care of various surgeons during two years and a half for a tumor of the sternum, which, although only moderately sensitive, continued steadily to increase. When she came to Prof. König the tumor much exceeded a child's fist in size, was sarcomatous in appearance, and moderately hard, and sprang from the sternum, extending laterally to the ribs. Before proceeding to its removal he practised removal of the sternum on some rabbits, and ascertained how difficult it was to effect this without opening the pleura, or even the pericardium. Having carefully divided the cartilages of the ribs in succession, he passed his finger under the bone which was about to be removed. Until this, nothing was amiss; but now an aperture was found to exist in the right pleural cavity, giving rise to a clucking sound of the respiration. He immediately occluded this with some antiseptic gauze, but then discovered that the tumor was adherent to the pericardium, an aperture into which was announced by the recurrence of the clucking sound. This was stopped up like the other, as was a hole which soon afterwards appeared in the left pleural cavity. In spite of all this, the patient only suffered from dyspnœa for a short time. The antiseptic dressing was first removed at the end of twelve days, when a portion of the skin of one of the flaps was found gangrenous, and the heart surrounded with pus. The next dressing took place five days later, and complete healing of the wound only took place very slowly. The patient was exhibited. The total removal of the sternum, attended with openings into the three cavities of the chest, must surely be a surgical *unicum*.—*Med. Times and Gazette.*

DISLOCATIONS OF THE THIGH REDUCED BY NEW METHODS OF MANIPULATION.—In cases where reduction of the femur by manipulation in the usual way, with the aid of anæsthetics, has failed, or is inapplicable, and as a substitute, in many cases, for anæsthesia, assistants, and mechanical power, Mr. Kelly (*Dublin Journal of Medical Science*, October) proposes the following methods:

For posterior dislocations.—The patient is laid prostrate upon the floor. Three strong screw-hooks are inserted into the flooring close to the perineum and each ilium of the patient, and to these hooks he is secured by strong bandages or rope. The injured thigh is flexed at right angles to the patient's body; the foot and lower extremity of the tibia are placed against the perineum of the surgeon, who, bending forward, with the knees slightly flexed, passes his forearms behind the patient's knee and grasps his own elbows. Reduction is now accomplished by drawing the femur upwards; but circumduction may also be practised; the surgeon, stepping backward, then extends the limb, and lays it by the side of its fellow. In sciatic dislocations, in order to liberate the head of the bone from the foramen, a bandage may be passed around the thigh, close to the trochanter, by which an assistant may make traction.

For anterior dislocations.—The patient is placed upon a table of such elevation as to have his pelvis nearly as high as the trochanter of the surgeon. A bandage around the pelvis, and secured to the side of the table farthest from the dislocation, affords counter-extension. The surgeon, with his face directed towards the dislocated joint, and standing on its inner side, with his trochanter pressed against the femur, now bends the leg behind his back, and grasps the ankle with the corresponding hand. Reduction is effected by rotating or turning his body partially away from the patient, thus making traction on the femur in the most favorable direction, and at the same pressing its head towards the acetabulum with the disengaged hand.

OVARIOTOMY WITHOUT LISTERISM.—Lawson Tait read a paper at the last meeting of the British Medical Association, containing a statistical account of one hundred consecutive cases of ovariotomy performed without any of the Listerian details (*Brit. Med. Journal*, October 28). Of this number only three died, and one of these died of accidental suffocation. He attributes his success to—1, the total abandonment of the clamp (Mr. Spencer Wells's) treatment of the pedicle; 2, the

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adoption of Keith's method of treating the peritoneum; 3, the adoption of Koeberlé's and Keith's method of cleansing the peritoneum; 4, increased personal experience; 5, diminished proportion of cases which had been frequently tapped; 6, the complete abandonment of the use of carbolic acid, or any other (so-called) antiseptic system, in the performance of the operation, and in the subsequent treatment; and, 7, the establishment of hospital discipline and hygiene, on the best-known principles, for private as well as for public patients. The discussion upon this paper was a very interesting one.

SODIUM CHLORIDE SOLUTION AS A TEST FOR ALBUMEN.—Dr. Roberts, of Manchester, recommends a saturated solution of common salt, acidulated with five per cent. of dilute hydrochloric acid (*B.P.*), as a substitute for nitric acid in the ordinary Gmelin's test. The precipitation is not a true coagulation, and the addition of more urine or water, or even shaking up the fluids, would cause it to be redissolved. He claimed that the brine-test is fully as delicate as nitric acid, and it has the advantage of not being corrosive. It did not throw down the urates, as nitric acid sometimes did, nor did it deepen the tint of high-colored urine, or cause the disengagement of gas. In all these respects the brine-test presented a distinct superiority over nitric acid. The acidulated brine precipitated peptones, so that occasionally it produced a cloudiness in urines which yielded no reaction with nitric acid. Dilute sulphuric, dilute nitric, or dilute phosphoric acid could be used to acidulate the brine instead of hydrochloric acid, and the test so prepared is equal in sensitiveness with that prepared with hydrochloric acid.—*British Medical Journal*, October 28.

AGREEABLE ANTISEPTIC AGENTS. — The glycero-borate of calcium and glycero-borate of sodium, according to Dr. Le Bon, in a communication to the Academy of Sciences (Paris letter to the *Lancet*), possess powerful antiseptic qualities, and may well be substituted for carbolic acid. More soluble in water, perfectly inodorous and unirritating, while at the same time powerfully disinfectant, they not only promise to be of value in surgery, but also have been employed successfully as preservatives for alimentary substances.

THE PROXIMATE CAUSE OF URÆMIC POISONING.—In all the cases of uræmia, according to Hlawa and Thomayer (*Berl. Med. Wock.*, No. 39), in which the kidneys were examined, they showed a more or less considerable, usually recent, small-celled infiltration which was not apparent in other cases of renal disease where symptoms of uræmia were absent. The infiltration of small cells existed in the neighborhood of the Malpighian bodies, and more especially at that part where the afferent and efferent vessels pierced Bowman's capsule, as well as about the interlobular arteries and the vessels of the renal cortex generally. This cellular new formation compresses the vessels, and so hinders the proper secretion of urine. The authors therefore regard the presence of this inflammatory product as a very important factor in the etiology of uræmia appearing in the course of inflammatory affections of the kidneys.—*Lancet.*

MISCELLANY.

USE OF CONDOM IN GONORRHŒA.—Several years since, one of my patients, suffering with gonorrhœa, complained to me of the annoyance caused by the discharge. The idea of using a condom immediately suggested itself to me, and I advised its use. At his next visit he expressed himself as being very much pleased with the treatment. Since that time I have frequently prescribed the same thing for other patients, much to their satisfaction. My plan is to cover the glans with a thin layer of disinfectant cotton, and then draw the condom over it. By this means undue pressure is avoided, perfect cleanliness obtained, and the movements of the limbs are not interfered with, as would be the case with a cumbersome bandage.—DR. C. H. CHALKLEY, in *Southern Clinic*.

TRAUMATIC TETANUS AND DEATH FROM VACCINATION.—Dr. Bates, of Columbia, reported a case of tetanus from vaccination at the meeting of the South Carolina Medical Association (*Medical News*). Ben Jones, a mulatto, was vaccinated February 9, on the arm, with carefully-selected humanized virus. He was again seen March 8, when he had ordinary symptoms of tetanus. Was examined next day by Drs. Talley and Howe. A most careful inquiry into the history of the case, and a searching examination of the body, revealed nothing to cause it except a small, healthy-looking, painless ulcer at the spot where vaccination had been performed a month before. The disease advanced, and caused death in fifteen days, in spite of careful treatment.—*Buffalo Medical and Surgical Journal.*

DERIVATION OF "CESS-POOL."—Cess-pool, a pool for drains to drain into. Also spelt *sess-pool*. *Sus-pool* occurs in Forster on Atmospheric Phenomena. The spelling *sus-pool* gives us a probable source of the word. *Suss* in prov. Eng. means hog-wash (Halliwell), and = prov. E. *soss*, a mixed mess of food, a collection of scraps, anything muddy or dirty, a dirty mess (Halliwell). Also a puddle, anything foul or muddy (Brockett).

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This is of Celtic origin; cf. Gael. *sos*, any unseemly mixture of food, a coarse mess. The word *pool* is also Celtic. Hence *cess-pool* or *sus-pool* is probably a corruption of *soss-pool*, —*i.e.*, a pool into which all foul messes flow.

I suggest, further, that *soss* is connected with Gael. *sugh*, juice, sap, moisture, also spelt *sogh*; W. *sug* (Lat. *succus*), moisture, whence W. *soch*, a drain, and prov. Eng. *soggy*, wet, swampy, *socky*, moist, prov. E. *sock*, the drainage of a farm-yard, *sock-pit*, the receptacle for such drainage. These words are obviously connected with E. *suck* and E. *soak*. Hence, briefly, a *cess-pool* is practically a *soak-pool*.—*Skeat's Etymological Dictionary.*

SACCHARATE OF COFFEE.—Carlo Paresi, in an Italian journal, describes a new method of concentrating and administering the valuable and useful constituents of coffee, as follows:

Roasted coffee (best), 1 part;
Refined sugar, 2 parts;
Warm water, q. s.

The coffee is exhausted in a convenient displacement apparatus of all its soluble constituents, by means of the warm water; the clear brown percolate is mixed with the sugar, and evaporated at a temperature not exceeding 50° C. (122° F.) in a suitable apparatus to dryness. Finally, it is reduced to powder, and kept in well-closed vessels.—*Druggists' Circular.*

A NEW LITANY.—District visitor: "Your boy looks very bad, Mrs. Jones: what's the matter?" Mrs. Jones: "Yes, ma'am, he be very bad; and, what's more, the doctor has made him worse. I'm sure we poor people ought to pray with all our heart, 'From all false doctorin', good Lord, deliver us.' I never saw its meanin' afore."—*Medical Times and Gazette.*

OLEUM MENTHÆ IN ZOSTER AND NEURALGIA.—The pain of herpes zoster is greatly relieved by painting the affected surface with oil of peppermint, as recommended by Dr. John Meredith (*Birm. Med. Review*). The value of the same remedy as a topical application in neuralgia is not as well known as it deserves to be.

THE ELECTRIC LIGHT IN A DISSECTING-ROOM.—The electric light is about to be introduced into the dissecting-rooms of the Ledwich School of Medicine, the largest in Dublin.

THE *Pharmacopœia Germanica* has at last been completed, and by the 1st of January will be generally distributed throughout Germany, replacing the edition of 1872.

A WRITER in the *North Carolina Medical Journal* commends cinnamon in menorrhagia. Though not much used, we know that it is an excellent remedy.

THE serious illness of Prof. Virchow has been announced, but later reports are rather more reassuring.

A NEW SOURCE FOR ALCOHOL.—According to the *Chemist and Druggist* (*Chem. Zeitung*, August 27), alcohol can be easily obtained from chicory, as the root contains, on an average, twenty-four per cent. of substances readily convertible into sugar. The spirit obtained by fermentation and distillation is characterized by a pleasant taste and great purity.

THE PHILADELPHIA COLLEGE OF PHYSICIANS has decided, after the beginning of the year, to open its library from seven to ten o'clock in the evening, the hours during the day remaining as before.

NOTES AND QUERIES.

102 EAST FIFTY-SEVENTH ST., NEW YORK,
November 27, 1882.

DEAR DOCTOR,—Your reporter makes me responsible for a very ridiculous statement on page 133 of your last issue. Dr. Forrest, in his paper, ignored other causes of delayed labor than a rigid cervix, and I said that one cause, not often recognized in cases where "rigid os" was commonly blamed for the delay, is slight narrowness of the mother's pelvis. In other words, the fourth and fifth lines of paragraph should read, "sometimes the cause of delayed labor, instead of rigidity of the os, as was," etc.

Yours truly,
O. A. CASTLE.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY FROM DECEMBER 2 TO DECEMBER 9, 1882.

MOORE, JOHN, MAJOR AND SURGEON.—The extension of leave of absence granted November 3, 1882, is further extended one month. Paragraph 4, S. O. 283, A. G. O., December 6, 1882.

CALDWELL, DANIEL G., CAPTAIN AND ASSISTANT-SURGEON.—Leave of absence granted in special orders No. 105, October 3, 1882, Department of the Platte, extended three months. S. O. 279, A. G. O., December 1, 1882.

CRAMPTON, LOUIS W., CAPTAIN AND ASSISTANT-SURGEON.—Granted four months' leave of absence. S. O. 280, A. G. O., December 2, 1882.

GORGAS, W. C., ASSISTANT-SURGEON.—Relieved from duty at Fort Brown, Texas, and will accompany the Nineteenth Infantry to Forts Clark and Duncan, Texas. Their future stations will be announced. S. O. 130, Department of Texas, November 27, 1882.

MADDOX, T. F. C., ASSISTANT-SURGEON.—Relieved from duty at Fort Brown, Texas, and will accompany the Nineteenth Infantry to Forts Clark and Duncan, Texas. Their future stations will be announced. S. O. 130, Department of Texas, November 27, 1882.

POWELL, J. L., ASSISTANT-SURGEON.—Relieved from temporary duty as attending surgeon at headquarters Department of Texas, and to proceed to Fort Davis, Texas, and report to the commanding officer for duty. S. O. 129, Department of Texas, November 23, 1882.

REED, WALTER, CAPTAIN AND ASSISTANT-SURGEON.—Assigned to duty as attending surgeon, headquarters Department of the Platte. Paragraph 2, S. O. 127, Department of the Platte, December 4, 1882.

TAYLOR, MARCUS E., CAPTAIN AND ASSISTANT-SURGEON.—The leave of absence granted August 14, 1882, is extended two months. Paragraph 6, S. O. 283, A. G. O., December 6, 1882.

GRAY, WILLIAM W., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—The leave of absence granted on surgeon's certificate of disability, October 31, 1882, Department of the South, is extended five months on surgeon's certificate of disability. Paragraph 3, S. O. 278, A. G. O., November 29, 1882.

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PHILADELPHIA, DECEMBER 30, 1882.

ORIGINAL LECTURES.

CLINICAL LECTURE

ON A CASE OF CIRRHOSIS OF THE LIVER.

Delivered at the Philadelphia Hospital, October 28, 1882,

BY JAMES TYSON, M.D.,

One of the Physicians of the Hospital, Professor of General Pathology and Morbid Anatomy in the University of Pennsylvania, etc.

Reported by DAN. W. NEAD, M.D.

GENTLEMEN,—I have recently been showing you some cases of disease of the liver, and to-day I bring before you another of the same class. Our patient is 38 years old, is a tin-roofer by trade, and was admitted to the house September 27. He had always been healthy, but for the last four or five years has been what might be called a hard drinker, frequently going on sprees. For six weeks previous to his admission he had been drinking steadily. On the morning of the day on which he was admitted, he had a very profuse hemorrhage from the nose, and that night he had a second hemorrhage, which was checked only by packing the nostril with tannic acid. He also had some nausea and loss of appetite. The second day after his admission (September 29) he noticed his limbs were swelling, but an examination of his urine revealed nothing abnormal. About the same time his abdomen began to enlarge. You can all see to what extent this enlargement has taken place, and by placing my hand on one side of the abdomen, and gently tapping the other side, I get distinct fluctuation, showing conclusively the presence of fluid. Now, what conditions will cause the presence of fluid in the abdominal cavity? First, we have obstructive disease of the heart, which, by overloading the venous system, causes the watery elements of the blood to exude through the walls of the vessels. An examination of this man's heart fails to reveal any lesion: so we can exclude this. In the second place, it may be caused by renal disease. But if there be any disorder of the kidney of sufficient gravity to produce the amount of ascites present in this man, it would undoubtedly produce albuminuria; and we have failed to find any albumen in this man's urine. Excluding these two, then, narrows it down to the third,—*i.e.*, some interference with the portal circulation. Let us examine the liver and see if we can detect any alteration in it.

Having the patient on his back, percussing in the mammillary line, we find that dulness begins at the fifth rib and extends to the edge of the ribs. In the line of the ensiform cartilage there is tympany all the way from it to the umbilicus. In the mid-axillary line, dulness begins at the seventh interspace, and passes without interruption into the dulness occasioned by the ascites. In percussing the liver you will find it to be more easily mapped out by having the patient lie on the left side and draw up his thighs towards his abdomen; and I will now percuss him in that position. Going back to the mammillary line, we find dulness begins at the sixth rib and is replaced by tympany at the eighth rib. In the mid-axillary line dulness begins at the seventh rib and is replaced by tympany at the tenth rib. Posteriorly, dulness begins with the tenth rib and merges into that of the lumbar muscles. By this examination you perceive the liver is smaller than normal.

Now, what diseases are there in which the liver is smaller than in health? I can recall but one,—cirrhosis, or interstitial hepatitis. Let us now take up this man's symptoms, and see wherein they accord with the phenomena of this affection. The first thing that he noticed was the hemorrhage from the nose, and I called your attention to this symptom. What was the cause of it? It was entirely mechanical. The blocking up of the portal system causes engorgement of the veins all over the body, and the hemorrhage from the nose was simply an effort of nature to relieve the engorgement. Hemorrhage into the stomach and intestines is a more frequent symptom, and is even more directly accounted for. Next there is the ascites. We have already seen that the liver is smaller than normal, and this contraction must necessarily compress the vessels which pass through its substance. As a result of this, the current of the blood is retarded, and the serum exudes through the vessel-walls, producing the ascites.

Let us for a few moments consider the etiology of the disease. It is an error to regard the use of alcohol as the only cause of cirrhosis. In the vast majority of cases it doubtless is the cause; but I have seen

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cirrhosis in children two or three years of age and in young men of twenty; and Dr. Harley, in his recent work on the liver, refers to such cases (p. 307). The use of liquor, syphilis, and a prolonged exposure to malarial influences will produce it. When seen in very young subjects, it may generally, with very good reason, be attributed to congenital syphilis.

Let us pause to consider briefly the morbid anatomy of the affection. In this case the cirrhosis is evidently due to alcohol. In the excessive use of this substance the liver is the first organ to suffer organically, because the alcohol reaches it immediately after its absorption, in a comparatively unaltered state, and diluted only by the secretions of the stomach. Acting as an irritant, if long continued it soon excites an overgrowth of the connective tissue along the ramifications of the portal vein. The first product is a round-celled embryonic tissue, by the presence of which the bulk of the liver is actually increased; but, organizing into fibrillated connective tissue, it has the property of all such new-formed tissue, it contracts, and compresses the proper parenchyma of the organ,—that is, the cells,—and destroys them. When the circlets formed by the smaller branches of the portal vein are involved, the areas included in them are compressed and forced to rise upward, forming grain-like elevations, whence the term "granular liver." When the branches of medium size are involved, larger areas of liver-substance are compressed, and elevations, of which many correspond in size to the hob-nail, are produced, and there results the so-called "hob-nail" liver; and when still larger branches of the portal vein are involved, we have even larger bulging areas, and a "lobulated" appearance results.

As to the treatment, I am confident that small degrees of interstitial hepatitis may be removed by appropriate measures; and even where the overgrowth of interstitial tissue is decided, the process may be so modified that the liver will be able to perform its offices. Most important, however, is the removal of the cause; and where this is the excessive use of alcohol it must be discontinued if any results are to be expected.

The remedy for the removal of the hyperplastic connective tissue is pre-eminently iodide of potassium. It is best given in moderate doses while fasting, and in a large quantity of water. Two and a half grains in a tumblerful of water and on an empty stomach will do more good than five grains in a small quantity of water after meals. Along with this, the bowels must be kept active with salines. If there be any specific taint, one-thirty-second to one-twenty-fourth of a grain of bichloride of mercury may be given along with the iodide, three times a day. In malarial cases iron and arsenic are indicated. Counter-irritation over the region of the liver may be produced by an ointment made up of equal parts of mercurial and belladonna ointments. In this patient the treatment has been five grains iodide of potassium, largely diluted, three times a day, fasting, and his bowels have been kept freely open by the administration of salines. He has greatly improved under this treatment, and says that he is very much better. There is still, however, some fluid in the peritoneal sac, which had much better be removed by tapping; and I had intended to tap him in your presence, but he objects to the operation, and I will not insist upon it. He will improve much more slowly than if this water were taken away.

DRESSING OF WOUNDS.

BY MR. GOULD,

Middlesex Hospital, London.

GENTLEMEN,—My intention this afternoon is to talk to you plainly and simply of familiar surgical truths, which, by their very familiarity, have lost a great part of their force, and, therefore, some of their value. I think, therefore, that I could not occupy your time better than to speak of wounds and their treatment.

Whatever your practice may be, you will all be engaged in the treatment of wounds: it is the one subject which confronts every medical man, be he surgeon or physician. Then, again, not only is the treatment of wounds necessary for our profession to understand, but it also forms the largest part of the work of the surgeon; and all of you must be aware that within the last ten years there have been very great advances made in this subject of wound-treatment; and yet on every side we find differences in their treatment. One man says, leave them alone; another says, you must have all the elaborate parapher-

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nalia of antiseptic treatment; another uses cold water only; another applies astringents or caustics; some apply heat; some apply various wet dressings; others, again, apply dry dressings; some say the dressings should be light; others, again, say, use firm compression.

We find that under all of these plans excellent and brilliant results have been obtained. This is a stumbling-block to many of us when we come to treat wounds on our own account. I will, therefore, call your attention to what I believe to be the principles of treatment for these various details of wound-treatment.

First of all, what happens if there is no treatment at all? I mean absolutely no treatment, such as wounds that never come under the care of the surgeon at all, in those outlying districts where the patient is so far removed from medical aid. Now, what happens here? A very large percentage heal up perfectly; but we find differences in what is called the natural process of healing wounds. Here let me limit myself and say that I am going to talk only of open wounds, not including fractures, etc.; neither will I speak of old wounds or old ulcers, but confine myself to recent wounds. Now, we find that these recent wounds are said to heal in one or two ways: first, that some have been known to heal immediately,—that is, the severed surfaces being brought together, there is a gluing or uniting together of the surfaces or edges of the wound in exactly the same position as previous to the injury. That, however, has never been shown to exist, and I hardly see how the human mind can grasp such a mode of healing: for my own part, I reject it entirely. When you read that each wounded severed fibre shall be returned with accuracy end to end, I think that is unnecessary; and when you read of such a case as amputation of the breast, you will see at once that the whole thing is really absurd.

Of the real mode of healing wounds, the immediate, or union of severed edges and surfaces by some uniting material, is divided into three subdivisions,—healing by first intention, secondary intention, with a subdivision of what is called third intention, and what is called scabbing. I will not, however, go into these four divisions, as I want you to recognize this fact, that they are all essentially the same. I consider it to have been a mistake that so much time should have been occupied in calling attention to these modifications. Healing by first intention takes place when two surfaces are brought into practically precise apposition; lymph then being exuded becomes organized, and unites them with living matter. Healing by secondary intention is where the chasm is left and slowly filled up to the surface, and then undergoes a process of epitheliation. Healing by scabbing is an intermediate form, as in a punctured wound where there is a small space left between the severed surfaces, and the chasm is filled up with lymph and so organizes and fills up the wound. Now, if you take a wound that is healing by first intention, and tear it asunder, you then have a wound healing by secondary intention; if you bring the surfaces of a wound together after they have begun to granulate, and retain them there, you have practically healed that wound by first intention. I would first impress upon you that it is nature that heals wounds, and not the surgeon. Any man that speaks of himself as healing a wound is using language that he has no right to use. No surgeon ever has healed or ever will heal a wound. Surgeons do a good deal to aid in the healing of wounds. We are, however, met by this glaring fact, that nature makes a sad mess of a large number of wounds by her process of healing; and, although we cannot heal wounds, we have an important part to play in waiting upon nature as her handmaiden. Then, in what direction may nature fail in this process of healing wounds?

1. In the arrest of hemorrhage; but in a large number of cases nature arrests hemorrhage perfectly. When, however, large arteries or veins are cut across, we may have a fatal hemorrhage before the wound can be closed by nature. In such a case the surgeon steps in.

2. Nature fails in removing foreign bodies in a large number of cases.

3. Nature fails in the approximation of surfaces: not only is she unable to approximate them, but she draws them asunder.

4. Nature does not allow the parts to be at rest.

5. Nature allows tension to occur in a wound. And here allow me to point out for a moment the difference between what are called subcutaneous and cutaneous wounds. You are all familiar with the important fact that in subcutaneous wounds decom-

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position never takes place, but that in a surface-wound it may occur. A second great difference is this, that in the subcutaneous wound there is rarely an excess of exudation of lymph, while in surface-wounds there is always an excess of lymph exuded, and, unless that excess is carried off in some way, tension is the result, and that tension infallibly sets up febrile and inflammatory action. No antiseptic treatment can prevent that excess of lymph exuded, although it does prevent the sepsis.

6. The power of nature to prevent sepsis is very limited; and if you have any accumulation of matter from a wound being exposed to the air, it may undergo decomposition, and this may pass into the general system, which, passed into the general system, may prove fatal; and, even if it be not absorbed, it may act as an irritant. Wounds do not heal by inflammation. Inflammation is the most frequent cause of the failure of wounds to heal rapidly. The healing of a wound is a physiological process, while inflammation is a pathological process as well as a destructive process. One thing that surgeons have to prevent is the occurrence of inflammation.

We may now take up the question, What have surgeons to do in the treatment of wounds? They have to attend to these six principles of wound-treatment. It is well that we should always bear in mind that all surgical interference is attended with certain drawbacks, and therefore, when applying any treatment of any kind to a wound, to adapt our means closely to the ends in view. In hemorrhage it may be absolutely necessary for the surgeon to come in; but we have not to consider that alone, but we have to reduce the interference to a minimum. Now, the natural process of healing a wound has no drawbacks, but our method of treatment causes the wound to heal slowly. We should, therefore, always choose those means which interfere the least. In the application of pressure we are apt to apply this without a thought, as it were; but when we consider the extreme sensitiveness of these cut surfaces, it is an extreme irritant to the nervous functions, and so far as we irritate those nerves so far are we interfering with the healthy nutrition of the wound. Cold and heat, again, may interfere with the nutrition, and are therefore not to be used lightly. Then we come to the torsion and ligation of arteries. Torsion, I am inclined to think, is the best, as it interferes less with the healing of the wound than the ligature. Of ligatures, those which are organizable—as catgut or structures of that kind—are undoubtedly the best; they interfere least of all; but, inasmuch as they are at first foreign bodies, a certain process having to take place for the organization of these ligatures, they add to nature's work in healing wounds. Those ligatures that always remain in the wound necessitate a certain amount of inflammation, and are therefore so far bad. But do not go away with the impression that I am telling you not to use these means. I desire simply to impress upon you that each one has a drawback of its own. You must use them, but use those which have the least possible drawback.

Removal of foreign bodies.—This is essential if we desire to unite these surfaces by first intention: not only is their capability there, but they are irritants as well. For these two reasons, foreign bodies in all cases within limits should be removed. But, again, we have drawbacks in the violence offered in their removal, if we take, for instance, a man who has received a gunshot wound, and the powder is blown into the tissues. Now, to remove every grain of gunpowder would require considerable rough handling of the wound, and in doing so we should do far more harm than the gunpowder would do to remain there: so that, unless we can remove these bodies in a manner which will cause less harm than to allow them to remain there, we must leave them alone. We never get healing by first intention without the surfaces are approximated. The surfaces should be brought evenly and closely together; but this, remember, cannot be very well done. We may press them so closely together as to destroy their vitality; but every one of our surgical means attending this approximation is attended with drawbacks. The common way is by sutures; but this has its drawback, as it draws upon a limited area only, we never get a perfectly even approximation, and, again, these sutures are foreign bodies, and, as you are aware, it has been the effort of our surgeons of late years to find out the least irritating sutures. Some use catgut, silk, wire, horse-hair, etc.; and here, again, the same truth I desire to impress upon you,—that while it is necessary to use these means, always look out for the drawbacks.

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Movement.—I am now come to the most important I have yet spoken of. It is essential to keep healing wounds at perfect rest. Were I to take the whole hour to endeavor to impress this upon you, the time would be too limited, it being of such great importance. First of all, movement of the wound causes pain, and to prevent pain is one of our first duties. Not only does the irritation of the sensitive nerve-end cause pain, but it causes reflex action and irritation. Then, again, movement is injurious, because it separates the surfaces and tears asunder the lymph which is between them, and undoes what nature has taken many hours in doing. A surgeon could perfectly prevent a wound from healing by simply making movement. It is therefore impossible to overestimate the necessity of rest in the healing of wounds. Now, how are we to secure this rest? There are many difficulties in relation to this matter. In order to secure rest for one part of the body it is necessary to keep the whole body at rest, and that is less favorable for the general nutrition of the patient; that is one drawback. Or, you may have to put the patient in uncomfortable positions; and, again, we frequently have to apply splints and dressings tightly; then there is the danger of interfering with the circulation of the limb. And, although it is our duty as surgeons and doctors to apply these dressings, it is desirable to reduce all drawbacks to a minimum.

Tension.—This is found specially in the wounds that are treated by the surgeon. Although the material of the wound may be perfectly sweet, not decomposed in any way, and not containing any irritating material, tension will infallibly prevent the healing of the wound. This it does, not simply because of liquid being between the surfaces, but because the actual tension of the wound is the direct cause of inflammation. So if a wound is imperfectly treated by the surgeon, and tension takes place, the patient becomes uncomfortable, there is pain in the part, the part becomes swollen, and a red blush appears, the temperature and pulse rise, and there are all the signs of inflammatory fever. Relieve that tension, and almost instantly the redness and inflammation subside as if by magic, and the patient returns to a condition of health.

We now come to sepsis, or the decomposition of these fluids. This, with the arrest of hemorrhage, I shall place as the most important in the treatment of wounds from one point of view; that while each of these previous steps is important in the healing of wounds, they are not important in the matter of life and death; but these decomposing fluids are important in the matter of life and death. While you have decomposition the patient's life is always in danger.

Do not go away with the idea that because a wound has a foul odor, your patient's life hangs by a thread. A germ absorbed into the body from this decomposing matter is generally fatal, but not always so. By a beautiful law of nature, a granulating surface does not absorb readily; but if we have tension added, then we have the whole picture changed. Then inflammation occurs, preventing the healing process in the wound, and in this condition we have absorption going on more rapidly, an inflamed wound absorbing septic material far more readily than a granulating wound. Therefore, when to tension you have added decomposition, you have always a grave danger.

These six points, I think, are all that the surgeon has to take into consideration in the treatment of wounds. Now as to the various popular ways in which wound-treatment accomplishes these results. I will take up first what is called no treatment at all. I purposely omit the general treatment here, as it is impossible to say much upon the matter in an hour. I would simply say that alcohol never helps the process of healing. Now, in the "no dressing" of wounds. Here there is no special dressing put on, and no antiseptic dressing applied. Approximation of surfaces is considered of slight importance; but the great danger of septic matter is where there is only partial closing of the wound. If the wound is left entirely open, it is said there is no danger of tension. I hardly think it true, however. The difficulty is just this: the surgeon always has a desire to secure the rapid healing of a wound, and the question is as to how wide the wound is to be left open for the escape of waste matter.

The second method is the dry method. In this case great quantities of cotton-wool are placed upon the surface. The large amount of wool filters the air to a certain extent, and the tension of the wound may, perhaps, be prevented.

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Then, again, we have the exact application, in which the compression is kept up. That plan of treatment is an excellent one, and excellent results have been obtained from its use.

The most popular form of treatment, however, is the aseptic form of treatment. While not losing sight of these other steps, it aims principally at the prevention of decomposition. But, while all of these are very important, the first and primary object of the surgeon is to prevent decomposition, and afterwards to pay attention to the other points.

This is my own form of treatment, and, so far as I have seen, I believe it to be the best. But I desire you to remember that the aseptic treatment is not a treatment which aims solely to prevent septicism; but the surgeon must keep in view these six principles which I have given you, if he desire to treat wounds successfully. It is mere child's play, in my opinion, for surgeons to quarrel as to whether attention is best directed to one, two, or more of these points. Every one is important, and he will be the most successful surgeon who pays attention to all of them. But I would beg you to prove and test these principles in your own practice, and then hold fast to those which are good.

ORIGINAL COMMUNICATIONS.

STRICTURES OF THE URETHRA SITUATED AT OR NEAR THE MEATUS: THEIR CAUSES, NATURE, AND TREATMENT.

TOGETHER WITH A DESCRIPTION OF A NEW MEATOTOME.

BY CHARLES L. MITCHELL, Ph.D., M.D.,
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AMONG the direct consequences of gonorrhœal inflammation of the male urethra, stricture of the urethra is by far the most frequent result, and to its influence, direct and indirect, the origin and continuance of most chronic urethral affections may be ascribed. The stricture or strictures may be situated directly at the meatus, or may occur in any portion of the urethral canal between the meatus and the prostate gland. In regard to the frequency of its occurrence in these situations, several different views have been advanced. According to Sir Henry Thompson, sixty-seven per cent. of all strictures are situated within the membranous portion of the urethra, sixteen per cent. are located in the region between the membranous urethra and within two and a half inches of the meatus, and seventeen per cent. occur either at the meatus or within two and a half inches of this point. The senior Gross differs from the above in placing the point of greatest frequency in that portion of the urethra situated between the scrotum and the head of the penis, and the point of least frequency at or near the meatus. The measurements of Sir Henry Thompson were obtained from post-mortem specimens. On the other hand, Dr. S. W. Gross,* in a tabulated statement of 173 cases of stricture, where the measurements were made on the living subject with the bulbous bougie, places the points of relative frequency as follows: 76, or 43.93 per cent., in the posterior portion; 48, or 27.74 per cent., in the middle portion; 49, or 28.32 per cent., in the anterior portion of the urethra, or at the meatus.

Dr. Fessenden N. Otis, of New York, whose indefatigable labors on this subject are well known, is a firm believer in the greater frequency of strictures in the spongy portion of the urethra or at or near the meatus. In a *résumé* of 258 cases,† he places the points of relative frequency as follows: 52 at the meatus or within the first quarter-inch of the urethra; 63 in the following inch, viz., from ¼ to 1¼; 48 from 1¼ to 2¼; 48 from 2¼ to 3¼; 19 from 3¼ to 4¼; 14 from 4¼ to 5¼; 8 from 5¼ to 6¼; 6 from 6¼ to 7¼.

Dr. Otis has also advanced the theory that many supposed cases of deep-seated stricture are not organic, but spasmodic, owing their existence to the reflected irritation of an undetected stricture, generally of large calibre, situated in the anterior part of the canal.

Dr. Bevan, of Baltimore,‡ reports the measurements of 225 cases as follows: 38 in the first quarter-inch, including the meatus; 47 between ¼ and 1¼; 51 from 1¼ to 2¼; 50 from 2¼ to 3¼; 14 from 3¼ to 4¼; 11 from 4¼ to 5¼; 9 from 5¼ to 6¼; 5 from 6¼ to 7¼. Of these, 186, or 82 per cent., it can be seen, were located within the first 4¼ inches.

* New York Medical Record, 1875.
† Otis, Stricture of the Male Urethra, p. 206.
‡ New York Medical Record, December, 1880, p. 640.

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My own experience has been similar to the above. In the records of 100 cases, 10 were situated at the meatus, or within the first quarter-inch; 38 from ¼ to 1¼; 22 from 1¼ to 2¼; 15 from 2¼ to 3¼; 9 from 3¼ to 4¼; 6 from 4¼ to 7¼ inches.

Summing up these cases, we find, from the measurements of S. W. Gross, Otis, Bevan, and myself, in all amounting to 756 cases, that 418, or 55.4 per cent., were located in the first 2¼ inches; 203, or 26.9 per cent., from 2¼ to 4¼ inches; and 135, or 17.7 per cent., from 4¼ to 7¼ inches. Should we leave out the results of Dr. S. W. Gross, the discrepancy from Sir Henry Thompson's measurements becomes still greater. In 583 cases, 369, or 63 per cent., were situated within 2¼ inches of the meatus, or 524, or 90 per cent., were located within 4¼ inches of the meatus.

The discrepancies between the two sets of observers represented by Thompson for the one class and Otis for the other may be largely explained when we consider that the observations of the former were founded upon examinations of post-mortem specimens, and only such cases of stricture were enumerated as were apparent after death. Otis, Gross, and Bevan made their measurements upon the living subject, and no doubt counted in a number of slight constrictions, probably not apparent after death, which their opponents would not admit to be organic strictures at all, but which nevertheless were proved by the results of treatment to be a fruitful and continued source of evil. The greater percentage of strictures in the anterior portion of the urethral canal would also seem to be but a logical sequence to the course of a gonorrhœa. We know that the disease usually begins at the meatus and gradually travels backwards along the urethra, diminishing in virulence as it proceeds, and we therefore should expect to find most traces of inflammatory action at points where the pathological process has been most intense. Moreover, we know from clinical experience that in over fifty per cent. of cases of gonorrhœa the disease does not affect more than the first three inches of the urethra. We should therefore justly expect the greater number of strictures from specific urethral inflammation to be situated in the anterior portion of the canal; and our expectation has been borne out by the facts. Strictures of the deep urethra more generally are the results of traumatism; they may also occur from gonorrhœa, but then are the result of frequent attacks, and are usually accompanied by one or more anterior strictures. A potent factor in the question may be found in the fact that different methods of diagnosis have guided the observers. The old school, under Sir Henry Thompson, relied upon post-mortem specimens, and the indications afforded during life by explorations made with the steel bougie or sound. The new school, of which Otis is the originator and most shining light, base their conclusions upon careful measurements taken from the living subject with accurate diagnostic instruments, such as the urethrometer and bulbous exploratory bougie, and improved methods of research. It may be added that the weight of recent medical testimony is overwhelmingly in favor of the new school, and Sir Henry Thompson himself, in a recent address, has practically admitted the truth of their conclusions. From these facts we can readily understand that strictures at or near the meatus must necessarily comprise the majority of the cases which are brought to the notice of the physician. A few points concerning their origin and treatment may therefore prove interesting.

Strictures of the urethra of specific origin, whether deep-seated or located in the region of the meatus, bear a distinct and direct relation to gleet and chronic urethral discharges. I do not think I make an extravagant statement when I assert that out of one hundred cases of urethral inflammation in which the discharge lasts over three months fully ninety or more owe their continuance to the presence of an organic stricture of the urethra. Cases of long-standing gleety discharges, exceedingly rebellious to ordinary methods of treatment, are but too common, and in many cases the failure to cure may be ascribed either to deficient knowledge on the part of the physician or to a neglect of careful urethral exploration with proper diagnostic instruments. The average practitioner is satisfied with writing a prescription for a copaiba mixture or an injection of sulphate of zinc and opium, and never thinks of doing anything more. Should he be more enlightened, he is too apt, unfortunately, to make his urethral explorations with the ordinary conical steel

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sound, and, finding with it no stricture, conclude that none exists. *The fact is not sufficiently recognized that the meatus is not a correct index to the calibre of the urethral canal.* It may be contracted by cicatricial tissue, by traumatism, by disease, or may exist contracted congenitally, and hence must be a faulty and imperfect gauge. The dimensions of the urethral canal may be much larger behind this contraction, and an instrument which is sufficiently small to be passed through the meatus will entirely fail in detecting any stricture of large calibre situated behind. Narrow and tight strictures can of course be easily detected by this imperfect method of examination, but in such cases their presence is also indicated by other characteristic signs. Where strictures of large calibre occur,—and they constitute by far the greater majority,—they must, however, pass entirely unrecognized.

It has been my peculiar province to meet with quite a number of cases of chronic urethral discharge where the patients had been pronounced by previous medical advisers to be perfectly free from stricture. In almost all of these cases I have found the trouble to proceed from one or more strictures of large calibre situated either at the meatus or from one-quarter to one and one-half inches back. These latter strictures were generally linear, forming a band several lines in extent and thickness, and elastic in character. They were accompanied by localized patches of granular inflammation, or else immediately behind the stricture would be found a small area more or less denuded of mucous membrane, and inflamed to a degree sufficient to bleed upon slight pressure. In many cases, also, the influence of the stricture would be sufficient to cause a sensitive and hyperæsthetic condition of the mucous membrane of the whole canal. In all of these cases, however, there was increased sensitiveness of the membranous and prostatic portions of the urethra, and in several the hyperæsthesia was so great as to render the introduction of an exploratory instrument in that region a matter of extreme difficulty. When the point of the instrument reached the membranous region, the spasmodic contraction of the muscles was such as to prevent for a time its passage and to strongly simulate organic stricture. Other symptoms common to these cases besides the discharge were pain in the lumbar regions, perineal pains, increased frequency of micturition, etc.

The recognition of this class of strictures is not an easy matter. They do not, as a rule, result from the more severe cases of gonorrhœa, for in such cases the amount of inflammation is sufficient to produce a stricture of well-marked and decided characteristics. On the contrary, from the history of a number of cases, they are more prone to result from light or "bastard" gonorrhœa (non-specific urethritis), in which there is not a high degree of inflammation. The discharge is scanty, whitish, and semi-albuminous in character, and slow to disappear, and there is little swelling of the urethra or pain on micturition. When the discharge continues for a month or two, this slow inflammatory action appears to develop the form of stricture above alluded to, probably by causing an agglutination of one or more of the delicate longitudinal folds which the urethra assumes in a state of rest. It also may be that this agglutination occurs at a point where there is already a slight transverse ruga of the urethra, and, by a minute deposit here of exuded lymph in the longitudinal fold, so diminish the calibre of the urethra at this point as to produce a thread-like stricture scarcely noticeable. Yet this insignificant constriction, by its irritation, can prolong indefinitely a urethral discharge. How?

It is a fact well known in physical experimentation that the velocity of a stream of liquid flowing through a tube is proportioned to the smoothness of the internal surface of the tube. Should the surface be rough, as, for instance, in a tube of cast iron, the velocity of the stream will be much less than in a tube of smooth glass, as the friction developed by the passing of the current over the inequalities of the iron will materially impede the flow. Moreover, at each minute inequality will be developed a point of friction or rubbing. Now, the urethra is simply a tube for the exit of the urine from the bladder, and is subject to the same physical laws. As the urine passes through the canal, this slight constriction, offering, as it does, an impediment to the current, will develop at this point a small amount of friction. Small as this amount is, its irritation is sufficient to keep up a discharge. It may be argued that the exploration of any normal urethra by means of a delicate instru-

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ment might reveal transverse bands even more marked than that of the point of stricture. Why do not these produce an inflammation of the urethra in their close vicinity by means of the obstruction which they must offer to the smooth passage of the urine? It may be answered that in a healthy urethra the amount of friction developed at these points is not sufficient to *produce* inflammation. The urethra must be already inflamed, abnormal in its condition; then the irritation will be sufficient to keep the canal at this particular point in a state of subacute semi-chronic inflammation. This transverse ruga may therefore itself, from a normal part of the urethra, be developed gradually into a pathological structure by the gradual deposition of lymph or inflammatory swelling. Strictures of the meatus often are developed by the same process. A man may be born with a congenitally contracted meatus, and never while healthy suffer more than a temporary inconvenience from its presence. But let once gonorrhœa, even though it be of mild character, be contracted at this point, and the irritation of the stream of urine to the constricted meatus, before unproductive of harm, will now develop a state of affairs often to be remedied only by an operation out of all proportion to the original trouble. In fact, most strictures of the meatus are produced, or, more properly speaking, aggravated, in this manner. Very few cases of gonorrhœa are sufficiently severe to cause stricture of the urethra at this point, few are the results of traumatism, while the majority of cases brought to the surgeon for treatment are simply the results of gonorrhœal inflammation upon a congenitally contracted meatus.

As I have before stated, strictures of the above class are prolific causes of protracted urethral discharges. The discharge is not generally of a character sufficient to create much discomfort, but the patient, who is almost always exceedingly sensitive on this point, recognizes that there is a discharge, and gives himself an amount of mental disquietude out of all proportion to the gravity of the case. These strictures escape detection for two reasons: first, the physician, from the history of the case and the lightness of the attack, does not suspect that a stricture exists; second, the urethral exploration, if performed at all, is not done with proper instruments or with sufficient care. I must reiterate, even at the risk of seeming tedious, that it is impossible to detect a slight stricture of large calibre with the ordinary conical steel sound. The weight and tapering extremity of the instrument cause it to act as a wedge; and, as the stricture is always elastic, it is so gently dilated as to cause no interruption to the smooth passage of the sound. The proper diagnostic instrument is the bulbous exploratory bougie, either that of metal, as recommended by Otis, or the French *bougie à boule*, made of rubber-covered webbing. My own preference is for the latter, as its lightness, flexibility, and elasticity allow of a delicacy of manipulation impossible with the metal instrument, and it imparts to the fingers of the operator indications of the slightest inequality or irregularity in the canal. He must be prepared to notice these, for, the stricture being of a slight character, the passage of the instrument may so dilate it as to render it entirely unrecognizable for the remainder of the sitting. Should a hitch or slight obstruction be noticed in passing over any point, the bougie should be at once gently withdrawn, so as to indicate by the resistance offered to the blunt shoulder of the instrument the exact location of the stricture. This location will be shown by the feeling imparted to the fingers of a slight "roll" or jump as the tip passes over the point of obstruction. The bougie should be carefully examined when withdrawn from the urethra, and should the "roll" of the instrument be accompanied by the presence of blood or muco-purulent bloody matter behind the shoulder of the acorn-tip, it may be regarded as proof positive that a stricture exists. In cases where the meatus is at all contracted, and also where exploration by the previous method has produced no results, the urethrometer devised by Dr. Otis should be employed. This allows the bulb of the instrument to be expanded after its passage through the meatus, and thus will detect a stricture whose diameter, while less than that of the urethra, is greater than that of the meatus, and which could not be recognized by an instrument small enough to pass through the latter.

The next question is as to treatment. The methods of treatment may be summed up as follows: gradual dilatation, rapid dilatation, internal urethrotomy, and electrolysis. Of all these methods, gradual dila-

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tation may be regarded as the most used and the most useless. While in strictures of the deeper parts of the urethra this course may produce good results, in the treatment of the special classes of strictures to the consideration of which this paper is devoted it is productive of no good whatever. Thousands of patients all over the United States are, and probably have been for the past several years, passing with painful regularity a bougie for the relief of a chronic gleet or an organic stricture. The greater majority of these are not one whit better than when the treatment was first commenced. Space will not permit me to go into a lengthy argument on this point: suffice it to say, briefly, that treatment of strictures, particularly when of large calibre and when situated near the meatus, is not successful by the method of gradual dilatation, for several reasons. The character of the tissues, the limited size of the meatus, and the elastic nature of the stricture render all treatment of this character either negative or positively harmful. What physician with any experience in urethral surgery cannot call to mind scores of cases where the patient had been "bougied" *ad nauseam* without any beneficial result? As a therapeutic remedy, gradual dilatation ranks high in various obstinate urethral affections, but in the treatment of strictures at or near the meatus it is worse than useless.

Rapid dilatation is not much more successful. In tough and resisting strictures of the pendulous urethra very good results have been achieved, particularly where the dilating instrument used has been constructed on the principle of the Otis urethrometer,—that is, by the expansion of a portion of the instrument only, without including the meatus in the expanded portion. In elastic strictures, however, and in cases where the stricture is situated within the limits of the penis, the elastic character of the stricture or the non-dilatable tissues of the glans render the operation impracticable. The tissues of the glans do not allow of much dilatation, and consequently great pain is produced by any effort to produce the amount of stretching necessary to success.

As a rule, internal urethrotomy affords the best results in these cases. It is now a settled and recognized plan of treatment among all enlightened physicians to cut strictures of the meatus. The same method applies equally well to those situated not deeper than four inches from the meatus, particularly when the stricture is elastic in character. In fact, these latter can only be removed by an incision, as dilatation but stretches them, and when the dilator is removed they relapse to their original condition. Urethrotomy effectually severs the band, and consequently allows the canal to regain its normal calibre. An expanding instrument of the Otis plan should always be employed, as the stricture is more effectually divided with a slighter incision than where the knife is used on the flaccid urethra.

The instruments recommended for incising the meatus have always been unsatisfactory. A knife of some shape, bistoury, tenotome, scalpel, pointed or blunt, or the *bistouri caché* of Civiale, have been usually employed. The latter instrument has long ago been retired into well-merited obscurity, and the knife is the only method. The trouble is with this that either too little or too much cutting is done. The impossibility of accurate measurement, the profuse bleeding of the parts, the unsteadiness of the hand of the operator, the retraction of the penis, are all difficulties which tend to interfere with a perfect result. The patient, if anything, is cut too much, and he goes around with an immense slit in the end of his penis, which, from the destruction of the natural shape of the outlet, causes much discomfort in urination.

In operating upon cases of stricture of the meatus, and in other cases where the stricture was situated a short distance behind the meatus, I have been accustomed to use the admirable urethrotome No. 4 of Dr. Otis. For such purposes, however, the instrument is large and consequently inconvenient, calling for the use of both hands, and thus requiring the services of an assistant. I therefore, after some thought, devised the following little instrument, based upon the same principles as the urethrotome of Otis. I wished to obtain a small compact instrument, capable of operating upon all strictures within two and a half inches of the meatus, which I could manage with one hand, and which would cut with exactness and regularity. For the successful accomplishment of my desires I am much indebted to Messrs. Tiemann & Co., of New York, by whom the instrument has been constructed.

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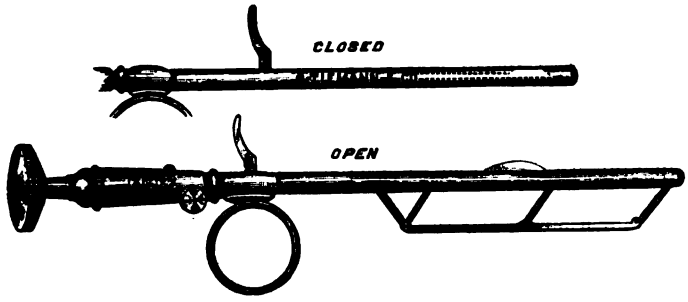
The instrument consists of a straight rod of steel, about four inches long, attached to a short handle. This rod is hollow, and conceals on the upper side a movable knife-blade, and on the lower side an expanding bar similar to that used in all of Otis's instruments. The expansion of this bar is regulated by a milled head forming part of the handle of the meatotome, and the amount of expansion is indicated by an index moving up and down upon a graduated scale upon the upper surface of the handle. In my own instrument the amount of expansion ranges from No. 15 to No. 35, French scale; but it can be made greater or less, if necessary, in another instrument. The knife-blade is attached to a concealed steel rod sliding through the hollow rod of the instrument and terminating at the rear in a finger-piece or shoulder. The blade can be completely withdrawn, if necessary, for purposes of cleansing. A finger-ring placed on the under side of the handle completes the instrument. I should also say that the knife-blade is somewhat larger than usual, and is so arranged as to be concealed when in place. The withdrawal of the knife-rod causes the knife to project at once from the upper surface of the instrument. The cut represents it as both closed and open.



The method of operation is as follows. The patient is placed in a reclining position, the exact location of the stricture having been previously ascertained. The closed meatotome is well oiled, and the rod gently inserted in the urethra until the extremity containing the knife is about one-quarter of an inch beyond the stricture. The milled head is then rotated until the expanding bar dilates the urethra to the proper degree, previously determined. For instance, should it be determined to bring the meatus up to 30 Fr., the instrument is dilated to 23 or 25 Fr., the incision made by the knife accomplishing the rest. The operator now steadies the penis with one hand, pressing the sides rather tightly against the instrument within, so that there shall be no slipping, and, with the handle of the meatotome in his other hand, inserts the middle finger of this hand in the finger-ring, steadies the milled head firmly against the palm of his hand, and, by his forefinger pressing against the finger-rest, forcibly withdraws the knife. As the knife is withdrawn, it comes in contact with the band of stricture kept tense and dilated by the expansion of the instrument, and effectually incises it. The milled head is reversed so as to contract the expanding bar, the knife returned to its place, and the meatotome withdrawn. Should the operation be at or very near the meatus, this will not be necessary, as with the cut the whole instrument will slip forward and out. Should it be necessary, the stricture can be still further divided by reinserting and expanding the meatotome, and again cutting; but one operation is generally all that is necessary. I have now operated with this instrument in a number of cases, with gratifying results, and it has met with similar success in the hands of several of my friends who have used it repeatedly. It cuts quickly, evenly, and with perfect exactness, and with a little experience the operator can so regulate the expansion as to cut the meatus or the stricture to just the size desired, neither more nor less. Its small size,—being altogether only five and a half inches long, it can be easily carried in the vest-pocket,—its compactness, accuracy, and ease of manipulation, will, I think, commend it to all. Its great excellence, in addition to its precision, is that as the instrument can be manipulated almost entirely with one hand, the other is left free to manage the penis; and I need hardly tell any one how much better the

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surgeon can do his work with the co-ordination of his own two hands than when he is dependent upon the services of another. A peculiar feature that I have noticed while using the instrument is the small amount of pain occasioned. The stretching of the urethra seems to obtund the sensibility of the nerve-filaments, and, as the operation is over in a moment, the patient is extremely gratified by the rapidity and slight discomfort of the process.

The uses of this little instrument do not end here. I believe it to be exceedingly well adapted for like operations upon the female urethra, upon the os uteri, for dilating and opening fistulous tracts, and, in fact, performing any dilating and cutting operation upon a short, narrow, and contracted passage. I have found it good practice after these operations to use a short urethral suppository or medicated bougie of a sedative and slightly astringent character. It separates the divided tissues and keeps them from reuniting, and, at the same time, encourages the unhealthy spots of mucous membrane to healthy action. I have not found it necessary to resort to the usual plan of after-treatment with sounds, believing that my cases have done better without their use. They only irritate and do not produce much benefit. If the stricture is properly divided, there is little or no danger of subsequent contraction of the parts.

In reference to electrolysis I have said nothing, having had no experience in its use. From the brilliant results obtained by Dr. Newman, of New York, in the treatment of a number of cases of narrow and deep-seated strictures, I believe its use would be attended with much success in those of larger calibre. My purpose in this paper has been simply to direct the notice of the profession to the neglect of proper examination and treatment of many obstinate and annoying cases of urethral discharge; and should I have succeeded in throwing any more light upon the subject, I shall feel fully repaid for my labors.

839 Race St., Philadelphia, December 10, 1882.

Milk-Poisoning.—Dr. Brush calls attention to the direct connection existing between cow's milk and cholera infantum, in a very suggestive and timely address, read before the Westchester County Medical Society, New York, and quotes some convincing cases. —*Medical Record.*

A CASE OF POISONING BY GELSEMINUM SEMPERVIRENS.

BY L. L. FRIEDRICH, M.D.,

Washington, D.C.

THE following very interesting case occurred in my practice some time since, and I take great pleasure in presenting it to the profession, as I had the opportunity of watching the various symptoms from the beginning.

Miss M., aged 14, large for her age, but very nervous and weak, took, August 17, at 11.45 A.M., a teaspoonful of an old fluid extract of gelseminum sempervirens by mistake for the bitter wine of iron. This preparation happened to be in the house, and had been prescribed over a year before by the family physician, who had assured them that it was a perfectly harmless remedy.

I was sent for at 12.30 P.M. The patient complained of dizziness and headache. I made inquiry as to whether any medicine had been taken, and was told that, with the exception of a little buttermilk, she had taken *nothing*. Whiskey was given, as she was suffering with great prostration and muscular relaxation. Two convulsive attacks now coming on, a hypodermic injection of one-eighth of a grain of morphia sulphate was administered. Improvement immediately took place, and I left the patient for the time being, with directions that I should be sent for if any change occurred.

I had scarcely reached home when I was again sent for, and was told of the sad mistake, that gelseminum had been taken instead of iron. The symptoms by this time had become very marked. Prostration and muscular relaxation were excessive, so much so that she reeled and staggered about with two persons trying to keep her moving; she sank to the floor exhausted under whipping and slapping, and incoördination affected the entire system. The pupils of the eyes were widely dilated; everything appeared double; paralysis of the upper lids and lower jaw; the saliva ran from the corners of the mouth; the face was markedly congested. The tongue was also affected, and, to use her expression, so thick that she could not talk. The pharynx was also affected, so that deglutition was impossible except with great difficulty. Symptoms resembling hydrophobia set in. Hearing was greatly altered; sounds seemed as though they came many miles distant. A semi-comatose condition now supervened; the congested appearance of the face vanished into a pale, death-like expression; cold, clammy sweats covered the entire surface, and there was a marked lowering of the temperature. The pulse, which at first was quick and bounding, began to get feeble and thready. Respi-

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ration, at first normal, now began to be gasping.

Total unconsciousness came on; she could not be roused; skin was moist, and extremities cold.

The treatment was directed towards emesis and stimulation. Thirty grains of sulphate of zinc and a teacupful of mustard-and-water were given, but, owing to the action of the drug, enough was not absorbed to produce any effect. The throat was tickled with a feather, and a finger pushed down the pharynx, but without avail. Strong infusions of black coffee were given, together with hypodermic injections of whiskey (of which seventeen were used); also artificial respiration, after the manner of Silvester, hot affusions, mustard to the extremities and spine; at the same time messengers were despatched for stomach-pumps, but none could be obtained until the poison had time to become absorbed, so none was used.

By continued stimulation and friction the patient began to improve, so that by 6 P.M. she was so far recovered as to be able to swallow liquids with ease, and was then left to nature to bring about her complete restoration.

She was sent to bed, where she slept all night. The next morning she said she felt well, but weak and dizzy.

She recovered without further difficulty, except that a great many ulcerations occurred at the seat of the hypodermic punctures, which healed slowly. About five or six days after, a few ulcers made their appearance on her left ankle, which also were quite obstinate, but finally healed by strapping the part with adhesive plaster.

OLIVE OIL IN CHEST DISEASE.

BY W. THORNTON PARKER,

Acting Assistant-Surgeon, U.S.A.

IN the *Philadelphia Medical Times* for July 15, 1882, is a very valuable communication from Dr. Frank Woodbury, "On the Rational Treatment of Pulmonary Consumption." In this article I notice the following passage: "In all forms of chronic bronchial disease, the use of inunctions of cocoanut oil, walnut oil, sweet oil, lard, or similar substances, will improve the nutrition, and relieve the congestion of the mucous lining of the air-passages." This statement I consider of practical importance to the profession, and I regret to say that I do not remember having seen this very desirable mode of treatment recommended in any of our medical journals before. While a student in the private clinic of Prof. Von Giett, at the General Hospital in Munich, in 1873, I learned from him the value of sweet oil (oleum olivæ) in *all* forms of chest trouble, acute and chronic. Olive oil is undoubtedly superior to all the other preparations which Dr. Woodbury has recommended for inunction.

Prof. Von Giett uses olive oil in the following manner. The patient's chest is first thoroughly bathed in the olive oil, slightly warmed; then a strip of clean, old, and soft shirting, large enough to envelop completely the whole chest, and saturated with the oil, is carefully adjusted. Another piece of dry cloth covers the first; over this can be placed cotton batting or flannel, but usually only the clothing of the patient. This is the only application made by Prof. Von Giett in diseases of the chest where *warmth* is indicated. The old-fashioned and dangerous Indian-meal jacket he strongly condemns. These inunctions of olive oil will be found excellent in all cases where artificial nutrition is sought for. This method of treatment is especially advisable in bronchitis, pleurisy, pneumonia, and pulmonary consumption.

NOTES OF HOSPITAL PRACTICE.

PENNSYLVANIA HOSPITAL.

SERVICE OF THOMAS G. MORTON, M.D., ONE OF THE ATTENDING SURGEONS TO THE HOSPITAL: CLINIC HELD DECEMBER 2, 1882.

GENTLEMEN,—I will bring before you, presently, a patient upon whom I shall perform a re-amputation at the hip-joint; but I shall first occupy your attention with some cases illustrating atrophy following joint-inflammation and cases of congenital and acquired talipes or club-foot, in order to demonstrate the principles of the treatment, as well as the results you may expect from the division of tendons and the application of the proper kind of mechanical apparatus.

CASES OF CLUB-FOOT ILLUSTRATING POINTS IN PATHOLOGY AND TREATMENT.

This young girl, aged 12 years, was operated upon at our last clinic. It was a marked case of congenital talipes equinovarus. The tendons divided were the tendo Achillis and the anterior and posterior tibials, after which the foot was thoroughly stretched, and then was placed in this right-angle splint, which has, as you will observe, a broad band which passes

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over the instep to keep the heel down; the foot and limb were firmly bound to this splint by a roller band, but the toes were left uncovered, in order that the circulation might more readily be observed. The apparatus has been occasionally removed during the week.

You observe that the deformity is almost overcome: the remaining tendency to varus is so slight as scarcely to be noticeable.

You will remember the force I was obliged to exert after tenotomy in order to bring the foot into a good position by flexing, extending, and rotating the ankle; you heard the cracking noise as the parts successively yielded. I was able to accomplish this (the patient being etherized) by manual force alone, and was not obliged to resort to the mechanical stretcher, an instrument I devised many years ago for correcting deformities of the more obstinate forms as seen in adults. As I have already told you, club-foot, whether congenital or acquired, is essentially the result of nerve-lesions, a palsy, in fact, more or less extensive, involving certain groups of muscles, causing weakness or paralysis more or less marked, which may occur *in utero* as well as subsequently. The weaker muscles yield, and the stronger muscles cause the deformity. In all of these cases there is more or less atrophy. This you will find to be universally the case. I told you at my last lecture never to divide tendons in the infant foot, but to commence stretching the deformed foot at once after birth, and that with care all cases of varus could be cured by stretching alone and the use of a proper apparatus, and that the equinus, which is often associated with the varus, forming this deformity known as equino-varus, could often be overcome by stretching, and, if not, tenotomy of the tendo Achillis should not be attempted until the child was able to walk, when the ankle-motion would very materially, by constantly stretching the tendon after its division, aid in the cure.

This child I now show you is 4 months old: it presented at birth marked equino-varus. You will observe the result in the treatment by manipulation alone, and this I consider a great triumph. Notice how the mother grasps the foot, and can, by a little force, almost place the foot in the condition of calcaneo-valgus, so pliable has the joint become, while the equino-varus has completely disappeared. Observe also the difference in the development of the limbs,—the atrophy which I have referred to as always found in these deformities. The limb which is the subject of our treatment is decidedly smaller. The calf measures six and one-quarter inches, while the healthy limb at the same place is seven and one-quarter inches. The atrophy is seen also in the shortening of the limb and foot as compared with the sound side. A marked difference will continue through life. This atrophy can never be overcome by massage, electricity, or any other form of treatment.

This child has been wearing a very light brace, which aids in the treatment by keeping the foot in good position after it has been well stretched. The shoe has an improvement over the ordinary club-foot apparatus in this ankle-strap, which I devised some years ago, which keeps the heel down in the shoe. It is adjusted before the shoe is laced up.

The treatment of this case has been conducted by the mother, who has systematically stretched the foot until all deformity has vanished; and this has been brought about in the space of a little over two months. The infant should be kept under observation from time to time, and wear a light shoe with steel side-supports until all tendency to a recurrence has disappeared.

CLUB-FOOT FROM INFANTILE PALSY.

This next little girl is 6 years old. At the age of two years she had an attack of infantile palsy, one year after she had begun to walk. The atrophy from the palsy can be seen in the left leg, which is three-quarters of an inch shorter than the right, while the calf is five-eighths of an inch smaller than the sound one,—the difference being not only in circumference, but also in length of the limb. She has been under treatment for several months, and now walks pretty well; but you notice that in this child, as in all cases of infantile palsy, the patient will more or less drag the limb or throw it, because some of the muscles are more involved in the palsied state than others, and thus harmony of action is lost. The child has been treated by electricity, frictions, passive movements, and open-air exercise, and has greatly improved. The atrophy can be improved, but not overcome: the tendency to varus has nearly, if not entirely, disappeared.

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ATROPHY OF MUSCLES FOLLOWING JOINT-AFFECTIONS.

This young man illustrates another variety of atrophy from a joint-affection. E. F., 21 years of age, walks upon crutches, owing to an acquired deformity of the left limb. You recall the statement I made to you some time since, that as a result of joint-inflammations we may have atrophy. It is well illustrated by this case. There is always more or less structural change, involving the nerve-filaments going to and around the articulation, when the joint is in a state of inflammation. These changes in the nerve-filaments extend along the smaller to the larger nerve-trunks, and on to the spinal cord, leading to localized changes in the gray matter, and sclerosis and atrophy follow, the effects of which are evident in the areas to which the nerves are distributed, which had been thus secondarily involved at their origin in the cord. Every case of hip-disease which you see will have more or less atrophy of limb afterwards. It is important that you should have your attention directed to this, in order that you may anticipate subsequent changes. This patient, at the age of 6 years, had hip-disease, for which he was treated for six months at the St. Joseph's Hospital. The joint became anchylosed, and gradual atrophy of the limb resulted. Upon comparing the lower extremities, we find the thighs at the middle measuring eighteen and fourteen inches respectively, and the calves thirteen and one-half and eleven inches. The left leg is shorter; but this may in many instances in hip-disease be due to changes in the joint itself; but the thigh and leg bones here are undoubtedly atrophied, and are much smaller than those of the right side.

Here is yet another case illustrating atrophy of limb from strumous disease of a knee-joint. This girl, Margaret K., 9 years old, sprained her knee when two years of age. An abscess followed, which discharged for four years. Anchylosis subsequently took place. When she applied to me at the Orthopædic Hospital, the knee-joint was flexed to a right angle. On the 5th of October last I broke up the adhesions and used for a time a straight splint. She then was ordered a high-heeled shoe. At that time there was two inches' difference in the measurement of the calves, that of the right limb measuring nine and one-half inches, that of the left only seven and one-half inches. She can now walk without difficulty.

These cases illustrating atrophy following joint-inflammation are exceedingly interesting and instructive, as are also the constant want of development seen after palsies, and the associated atrophy in cases of club-foot, whether congenital or acquired.

SECONDARY AMPUTATION AT THE HIP-JOINT IN A CASE OF OSTEO-MYELITIS IN THE STUMP, AFTER AMPUTATION AT THE MIDDLE OF THE THIGH.

In this hospital we have had an unusual number of amputations at the coxo-femoral articulation. I have personally performed here four of these amputations at the hip-joint,—three secondary and one primary. Of the secondary operations,—two males and a female,—all three were for osteo-myelitis of the femur in thigh-amputations, and extending from the cut surface of the bone upward towards the joint. The fourth case was an enchondroma of the thigh, where I made a primary operation: the patient died on the seventh day, of exhaustion. Each of the remaining cases has recovered without an untoward symptom. The relief to the system by removing the dead bone, which is a great source of irritation and causes prolonged suppuration, was very marked. Upon dissecting the stump after the amputations, a number of fistulous tracts were usually found running deeply by the side of the bone almost up to the joint itself.

Let me say a word with regard to the cases of hip-joint amputation operated upon in this amphitheatre. The first time the operation was performed here it was done by the late Prof. Joseph Pancoast, in June, 1860, upon a case of medullary sarcoma of the thigh: the patient recovered, and survived the operation over a year. The second case was one of railroad injury: the femur was exarticulated by Dr. Hewson in 1864, but the patient died a few hours later. The next case was also operated upon by Dr. Hewson, in 1865, for enchondroma; but it met with the same fate. The fourth was by Dr. Agnew, in 1866, in a case of necrosis of the femur, following gunshot wound; but death followed from hemorrhage on the twelfth day. The fifth case was by myself, in 1866: it was one of re-amputation in a case of osteo-myelitis following thigh-amputation. The patient

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recovered. Dr. Hewson performed the sixth operation in 1873: it also was a re-amputation for malignant disease, which had returned in the stump after a thigh-amputation. The patient perished on the fourth day, from exhaustion. The next three cases conclude the series (Nos. 7, 8, and 9). The seventh and eighth (1877, 1878) were secondary for osteo-myelitis: they both recovered. The last (1879) was one of osteo-enchondroma, which died, as already stated.

Of the nine cases just reported, four were cured and five died. For other details of these cases I must refer you to "Surgery in the Pennsylvania Hospital," in which they are tabulated. The present patient is 41 years of age. He states that he sprained his ankle a year ago last October (1881). Following this, cellulitis occurred, which extended up the limb, eventually forming a large abscess in the thigh. This abscess never closed up, but led to necrosis of the femur, for which my colleague Dr. D. Hayes Agnew made an amputation at the middle of the thigh, but this wound has never closed. There was inflammation of the endosteum, extending up the bone and causing disease of the femur up to two and a half inches from the joint. There is also periosteal suppuration. He not only suffers by the constant discharge, but also suffers from pain. The only source of relief that can be offered is to get rid of the bone, which is enlarged and diseased within and without. There is no use in making a re-amputation higher up within a few inches of the joint, for the inflammatory action has doubtless by this time involved the ligamentum teres and cartilage of the head of the bone, which in these cases always sooner or later become diseased.

The immediate dangers of the operation are shock and loss of blood, and the subsequent dangers exhaustion, hemorrhage, and pyæmia. We may control the hemorrhage during operation by several means. We may use the abdominal tourniquet, which compresses the aorta and controls the circulation in this way. There is another method, by digital compression, first suggested by Dr. F. Woodbury while resident in this hospital. It is done by carrying the entire hand into the rectum and with the fingers compressing the common iliac vessels; or, if you cannot carry this out, a lever of wood may be introduced into the rectum and pressure made in a similar way: this has been used successfully in the London hospitals. In a case of re-amputation, however, we can save the patient from the risk of hemorrhage from the femoral artery, and obviate the necessity of all control of the circulation, by simply making a long anterior flap, which includes the principal vessel, or by a previous operation—as I have done—we can cut down and first tie the femoral artery. In this manner there is only the danger of hemorrhage from a few posterior vessels, which we will tie as we proceed. If we have a long anterior flap, as I propose to make, and a short posterior one, we will have the best drainage. [The patient was brought into the room under the influence of ether.—REP.]

When I grasp the bone at the end of this stump, the space between my thumb and forefinger is about five inches, showing a great increase of bone-tissue, and a probe is readily introduced on either side of the stump for a distance of two and a half to three inches. The hardness of the stump extends up at least six inches, involving the main portion of the bone. Above this there is very little remaining, and that is mostly made up of the great trochanter and the head and neck of the bone.

In making the long anterior flap, I cut down to the femur along the inner side of the thigh from the groin downward, and then around the end of the stump above the old cicatrix, so as not to divide the artery in making my flap. I then carry the incision to the outer side and up beyond the great trochanter. The next step is to separate the tissues from the femur, carrying the knife closely to and around the bone, in order to cut as few vessels as possible, carefully dissecting the tissues; then, opening the capsular ligament, the disarticulation is easily accomplished.

In these chronic cases we usually find a greater number of vessels than in a traumatic case, so that more hemorrhage must be expected; the smaller vessels become enlarged during the progress of the disease, and often become permanently patulous. You must remember that the inflammation which has existed here for a long time has so consolidated and glued the tissues together that it is with great difficulty sometimes that we can seize the vessels in order to tie them. We have now

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succeeded in carrying out the principle we essayed at the beginning, and have not opened the femoral artery.

You have noticed that, although I have applied about twelve ligatures, they all control vessels smaller than the radial artery. The little oozing that remains will cease shortly after exposure to the air. The femur presents extensive disease of the bone, and also shows the lesions incident to osteomyelitis and necrosis.

I shall not be in any haste to close this stump, but will simply apply a carbolized dressing for a few hours, and, when all oozing has ceased, the flaps will be brought together with adhesive plaster, and covered with carbolized oil and supported by absorbent cotton-wool and a bandage.

[The case made an excellent recovery. The wound largely united by primary union, and the patient's health has improved since the amputation was performed.—REP.]

TRANSLATIONS.

A CASE OF EXTIRPATION OF THE GALL-BLADDER FOR CHRONIC GALL-STONES.—Langenbuch, of Berlin, taking the ground that the gall-bladder is the locality in which gall-stones are especially developed, concluded that in cases of cholelithiasis in which repeated attacks of colic and other symptoms confirm the diagnosis, the patient may be saved from further suffering and from the dangers of ulceration and fatal peritonitis by removing the gall-bladder, with its contents, with perfect safety, by laparotomy. This view is supported by physiology and morbid anatomy, which demonstrate the fact that the gall-bladder is not an organ essential to life, inasmuch as it is frequently absent after death, either being congenitally deficient or destroyed by disease without there having been any material or evident disturbance of the health of the individual. Moreover, it is normally absent in some of the higher animals, as in the horse and the elephant. As regards the operation for its removal, after repeatedly performing it on the dead body, he arrived at the conclusion that, *of all abdominal operations for which preliminary laparotomy is required, the extirpation of the gall-bladder, with preceding ligaturing of the cystic duct, is to be regarded as the least complicated.*

The operation is detailed as follows. A transverse incision through the right abdominal wall, corresponding with the anterior border of the liver, meeting another along the outer border of the rectus muscle, so as to form a T, both of them being about 10–15 cm. in length, will open the abdominal cavity in the most convenient manner. The gall-bladder is at once exposed, with the fundus presenting, under the lower surface of the liver. If the colon and small intestines are now pushed backward by introducing a large flat sponge, and the right lobe of the liver lifted upward, the hepato-duodenal ligament will spring into view from below, so that the anterior boundary of the foramen of Winslow can be taken between the fingers of the left hand. In this fold run the great gall-ducts, and towards the middle the portal vessels. In order to separate the cystic duct, which lies farthest to the right,—in fact, almost isolated,—it is advisable to separate the few peritoneal attachments to the gall-bladder, with the aid of a few small incisions. The bladder decreases in size until it terminates with some spiral turns in the duct, upon which a tightly-drawn silk ligature is now placed, from 1 to 2 cm. from the bladder. Since the success of the operation depends upon the permanent occlusion of the cystic duct, the catgut ligature for this purpose is absolutely excluded. Having done this, the peritoneal investment of the gall-bladder is slit up around its circumference, the connective tissue holding it in place carefully divided by the knife or scissors, and the gall-duct is then cut outside of the ligature. In case the gall-bladder is greatly distended, its size may be first reduced by the aspirator, in order to prevent its rupture, and the consequent flooding of the field of operation. It is necessary to bear in mind the vascularity of the liver-tissue, injury of which should be carefully avoided; otherwise in this operation there will scarcely be found a vessel large enough to require a ligature. With the closure of the abdominal wound the operation is concluded, in which, with the exception of a small portion of the colon, scarcely any of the intestines are exposed.

Having completed the study of the details and principles of the operation, it was not long before the author had an opportunity of carrying it into actual prac-

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tice. A case of long-standing jaundice, enlarged gall-bladder, with occasional discharge of calculi, in a man 43 years of age, was seen in consultation in June, 1882. In spite of medical treatment, the affection, which commenced with an ordinary attack of biliary colic in 1866, had persisted; his general health had greatly suffered, and he became markedly emaciated. Attacks of pain were of frequent—indeed, almost daily—occurrence, and were so intense as to lead to fainting-spells on several occasions. Without detailing all the symptoms, it may be stated that the patient was in a decidedly precarious condition, nutrition was greatly impaired, pains were very severe, and there was great danger of the opium habit, so that the prognosis was very unfavorable. At the request of the patient, the above operation was performed July 15, in the manner prescribed, without any difficulty. Aseptic precautions were observed with unusual care. The gall-bladder was found in moderately distended condition: it contained two small stones. There was slight venous bleeding from the surface of the liver, which was checked by a stitch with a catgut ligature. After the operation the patient had no pain, and slept well the succeeding night. With the exception of a slight attack of dry pleurisy on the fourth day, which passed rapidly away, he had an uninterrupted recovery, and left his bed on the twelfth day, the wound having healed within a week after the operation. The results of the operation were very marked.

The old pains had, in November, not yet returned, nor had he had others. It was some time before the irritable, weak stomach was restored, but it had greatly improved. He had not taken morphia since the operation. The bodily weight increased so rapidly that in six weeks he had gained 7.5 kilos (about 19 pounds).

The author concludes that cholecystotomy is especially adapted to treatment of those cases in which the patience of the physician and that of the sufferer have reached their limit. It is a last resort, although it should not be too long delayed; it should be carried out only by a practised surgical hand, and conducted under the guarantee of the most rigid antisepsis. As it is the least dangerous of all laparotomies, it is in the special cases, as a matter of fact, to be preferred, in its actual though slight chance of life, to an existence given up to morphia and the innumerable possibilities of this most insidious malady.—*Berliner Klin. Wochenschrift*, November 27.

INVESTIGATIONS WITH REGARD TO THE MICROBE OF CONTAGIOUS PLEURO-PNEUMONIA IN ANIMALS.—Profs. Bruylants and Verriest have been for two years studying the contagium of the disease known as pleuro-pneumonia in cattle, and they claimed, in a preliminary communication upon the subject to the Royal Academy of Medicine of Belgium, in 1880, that they had verified the observations of Willems and Van Kempen as to the existence of an ovoid micrococcus in the fluids of the lung and superficial pustules, and that these, by inoculation, are capable of communicating the disease. As a result of a number of careful culture experiments, they further claimed to have isolated and artificially cultivated the special micrococcus in neutral fluids, and to have determined by experiment that the cultivated variety is not only exactly like the original, but is also capable of causing the disease after inoculation in cattle. This communication was made to the Academy, and, with the approval of that body, the experiments necessary to determine the value of the culture micrococci for preventive inoculation against this scourge were afterwards put in practice. A petition, endorsed by the Academy of Medicine, addressed to the government for aid in pursuing these scientific investigations, similar to those of Pasteur in France, was acceded to, and a subsidy granted. Unfortunately, a commission of control was also appointed, which succeeded in controlling the operations so completely that the commission finally resigned, nearly two years later, without doing any work whatever. The experiments were then undertaken at private expense by Profs. Bruylants and Verriest, who have published a pamphlet, entitled "Nos Rapports avec la Commission de Contrôle des Expériences relatives au Microbe de la Pleuro-Pneumonie contagieuse," in which the obstructive and masterly inactive course pursued by the commission is fully demonstrated. The authors state, with regard to the virus, that Dr. Willems and Prof. Van Kempen had observed, in 1852, in the liquid obtained by incision in a diseased lung, some special and very small corpuscles, apparently endowed with proper motion. Having con-

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firmed this, and made successful culture experiments with these microbes, they declared their ability to obtain them in any quantity and in an absolutely pure state. Inoculations with this attenuated virus were successful. The numerous experiments made with these culture products were followed by the development of pustules presenting all the external characters of pustules obtained by direct inoculation. In the liquid obtained from incision into these pustules they proved the existence of the same corpuscles as those heretofore found in the diseased lung and in the ordinary pustules of direct inoculation. Finally, the culture of this liquid has yielded the same reproduction. They concluded (1) that these corpuscles are microbes or living organisms susceptible of multiplication, and (2) that they are the agents and active factors in the inoculation for contagious pleuro-pneumonia, and that the culture microbes are, at least from the point of view of immediate effect, the equivalents of the pulmonary lymph. The exact value of these inoculations as a preventive, and the various details of the problem, are now under investigation, and will require time for final solution.

THE HISTOLOGY OF INTESTINAL NEPHRITIS AND CONTRACTED KIDNEYS DUE TO CANTHARIDIN.—Aufrecht claims that he succeeded, by administering small doses of cantharidin by subcutaneous injection, in producing in animals all the forms of acute inflammation of the kidney,—to wit, the so-called acute parenchymatous nephritis, the diffuse parenchymatous interstitial nephritis, and the contracted kidney, the latter being characterized by irregular pin-head-sized puckerings of the cortex, into which the slightly diseased connective tissue of the capsule projected. In more advanced cases the kidneys became distinctly bosselated. This form of disease of the kidney, caused by these injections, he had obtained in twenty-five cases in the course of four months. It is developed usually by about .0025 gramme (gr. $\frac{1}{25}$) of cantharidin. The histological appearances of these kidneys agreed exactly with what is known as contracted kidney in man. The glomeruli and tubules were found greatly diminished in size and compressed; the first were deprived of epithelium, but otherwise showed scarcely any abnormality, only a slight granular or wrinkled appearance. The epithelium of the urinary tubules was reduced, their cell-contents had a more protoplasmic appearance, here and there cylinders (casts) were found in the canals. The capsules of the Malpighian bodies, and, to a more considerable degree, the interstitial connective of the tubules, especially of the diseased ones, were enlarged by swelling of the cells of the locality, to which was added swelling of the cells of the adventitia and of the muscular fibres of the smaller vessels. The author therefore concludes that an etiological and also a pathogenetic connection is proved as existing between parenchymatous nephritis and the contracted kidneys; and, indeed, it would appear scarcely possible that the representatives of the view that diffuse nephritis generally is initiated by an inflammatory affection of the interstitial tissue (as held by Klebs) or of the vessels (as claimed by Cohnheim), and that parenchymatous nephritis is not at all to be regarded as inflammation, can in the future retain this opinion; for they would be required first to demonstrate in any way—clinically, pathologically, anatomically, or experimentally—that in the liver or in the kidneys a diffuse interstitial inflammation can be developed without preceding inflammation of the parenchyma, which has never yet been accomplished.

PTOMAÏNES IN THE AMNIOTIC FLUID.—The existence of a ptomaïne has been demonstrated in the amniotic water. The fluid, obtained by puncturing the membranes during labor, was subjected to chemical examination by Mourson and Schlagdenhauffen, by whom the fact was reported recently to the Academy of Sciences at Paris. If the toxic character of this ptomaïne shall be established, it may serve to explain some cases of miscarriage which may be caused by its presence in abnormal quantity. [As ptomaïnes have been shown to exist in normal urine, possibly the source of the pseudo-alkaloid here may rest with the fœtus rather than with the mother.—TR.]—*La France Médicale*, No. 56.

DIGESTIBILITY OF COOKED MILK.—One of the results obtained in a series of experiments by M. Hoffmann on the digestibility of casein was that with artificial gastric juice the cooked milk yielded a greater quantity of peptone than fresh milk.—*Centralblatt für Med. Wissenschaft*, No. 42.

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PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, DECEMBER 30, 1882.

EDITORIAL.

THE UNITED STATES PHARMACOPŒIA.

No. 2.

IN continuing the editorial task of commenting upon the new Pharmacopœia for the information of our readers as to its virtues, defects, and novelties, we to-day print in another column a list of the omissions. The first commentary to be made upon it is that there are several names which ought to be in it which are not there. What sufficient reason, for instance, can there be for the retention of poison-vine, *Rhus toxicondendron*, or of *Salix alba*, willow bark, or even of the beautiful dogwood? Still, the committee has done well to make the list as long as it is, if there be no improper droppings out. Commencing at the beginning and passing down the list, the first important name which attracts attention is Aconitia. Physicians who have been accustomed to use an ointment of this alkaloid in neuralgia and other complaints will be surprised at an omission which probably rests upon the fact that commercial aconitia—and, indeed, so-called chemically pure aconitia—is an uncertain substance, sometimes extremely powerful, sometimes very feeble. This does not, however, seem a sufficient excuse. Aconitia has no advantages, and many serious disadvantages, as an internal remedy, but its ointment as an external remedy has its own field of usefulness. It is the business of a Pharmacopœia to afford standard tests by which an apothecary can recognize the practical though not always the chemical purity of a drug, and not to dismiss such drug on account of the obscurity of its chemistry or the rascality or ignorance of manufacturers.

Passing down the list, Carbonic Acid Water should not, in our opinion, have been dismissed: it will continue to be just as useful, however, whether officinal or not,—which is a consolation that neither stupidity, carelessness, nor any other evil or good quality in a committee of revision can deprive us of. The Chloride of Barium and the Sulphate of Cadmium ought, perhaps, to have been retained; but we meet with no very decided cause of complaint until we come to Castoreum. This long rather than much used remedy would certainly have escaped destruction from any other than the most reckless iconoclasts; but it has had to go, probably because the committee was unwilling in any way to be *particeps criminis* in the extinction of that noble animal the American beaver. Good judgment seems again to assert itself, until we come to the Fluid Extract of Spigelia and Senna. Very many doctors will no doubt be incensed by the omission of Digitalinum, and possibly, out of respect to its considerable use, it should have been retained, although it is an uncertain preparation, never a pure principle,—a mixture of unknown quality,—and we are very well pleased that the committee have done what they could to send it to the limbo of the forgotten.

Are there no worms in Boston? Are the children of New York of such vicious nature that even the parasites flee from their inmost parts? For the action of the committee in regard to worm-medicine betrays the most extraordinary ignorance about vermifuges. The two most valuable officinal remedies for the round worm are dismissed. Fluid Extract of Spigelia and Senna will undoubtedly continue to be used; but the attempt to substitute Santoninate of Sodium for Santonin is fraught with danger. Santonin is very poisonous, and is very often given in poisonous doses. It is almost insoluble in the acid liquors

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of the stomach, and when in crystals only dissolves slowly even in the alkaline intestinal juices. For this reason it is brought into continuous, thorough contact with the worm, and is absorbed to as little extent as possible. That children so often escape serious poisoning is undoubtedly due to the fact that much of the santonin passes through the intestines. Santoninate of sodium is as poisonous as santonin, and is very soluble. A minimum proportion of it reaches the ascaris, a maximum proportion is absorbed. The Infusions are not at present much used, and their omission is no loss, except that of the Compound Infusion of Gentian, a much used and valuable remedy, which will probably maintain itself, officinal or not officinal. Practitioners should remember that it is ordered to prepare non-officinal infusions by a general formula, and that in most of the more powerful infusions the strength is thereby greatly increased. Either write "U. S. 1870" after an infusion, or give the strength it is to be made in the prescription.

A very valuable remedy omitted without reason is the Oil of Camphor. Of less importance, but still worthy of retention, are the Compound Ointment and Tincture of Iodine.

NEW VIEWS UPON THE PROXIMATE CAUSE OF INFLAMMATION.

THERE are good reasons for believing that in the march of medical science suppuration will take its place, by the side of fermentation and putrefaction, as a process caused by micro-organisms, and originating in no other way. A recent writer* suggestively remarks that "it has not been shown that it is possible to make a drop of pus without the intervention of a microbe." The fact that irritation or injury alone is insufficient to induce the phenomena of inflammation is demonstrated daily in contused wounds, in which the skin remains unbroken. It has been claimed, also, that by the adoption of certain well-known precautionary measures it is possible for wounds occurring under the hands of the surgeon, even in operations as grave as amputations, to heal without the formation of pus. In pursuing this experimentally, Hueter† and De Rausche have shown that no inflammatory reaction follows deep cauterizations when the parts are covered again by healthy skin; moreover, when destruction of bone occurs by the thermo-cautery, that, in place of being thrown off by suppuration, the parts simply are reabsorbed if the necrosis remains aseptic. Even caustic injections similarly disappear in the most inoffensive manner.

It is acknowledged that in the immense majority of cases inflammation and suppuration are consecutive to various kinds of irritation; but it is so simply because these favor the access or the development of lower organisms. Most frequently they wound the epidermic investment which serves to protect the tissues from aerial germs; or the instruments of traumatism carry the living morbific agents deep into the tissues, attached to their surface. At other times it is the organisms circulating in the blood which enter into the field; moreover, in all these cases, the tissues, deprived of their vital resistance by the effect of the violence, seem no longer able to oppose successfully the invasion and development of the microbes. With this in mind, it seems that, instead of being the necessary result of mechanical, physical, or chemical irritations of the tissues, inflammation in such cases appears entirely accidentally. Since these irritations play the simple rôle of occasional causes in the development of the above morbid phenomena, Desnois observes that logic forces us to recognize the intervention of a factor which is foreign to these irritations; this factor is the microbe, which governs, according to its caprices, the issue of traumatism; and

* Desnois, Du Rôle des Organismes inférieures dans l'Inflammation et la Suppuration. Revue Médical, Louvain, November, 1882.

† For references see Desnois's communication.

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he claims to have established that "neither true inflammation nor suppuration occurs in the economy, under any influence whatever, where the microscopic organisms cannot enter into play;" and, as a corollary, he asserts that "whenever inflammatory products or pus are examined, the presence of inferior organisms may be detected."

It is usually stated, after Cohnheim, that the essential phenomenon of inflammation is the diapedesis of leucocytes; but it has been declared by Hueter that this occurs only in the presence of monads, microbes of a globular form. These smaller forms invade, or are taken into the interior of, the white blood-cell, and produce the characteristic changes which are seen in the pus-corpuscles. The presence of such living organisms in pus-globules has been likewise affirmed by Hueter, Koch, and Birch-Hirschfeld. The contents of the chronic abscess appear to furnish an exception to this, for examination may reveal no microbes; but it is possible that the microzymes, having passed through their evolution, have become changed and no longer recognizable. Koch found, experimentally, in some cases, that around the borders of an inflammation the tissues were literally stuffed with the micrococcus, from which the fluid contents were entirely free; and Billroth has observed that these microbes are abundant in recent inflammatory collections, but further on in their progress may disappear entirely. The constant presence of a large number of cocci in the intestinal tract, and their frequent, if not constant, appearance in the circulation, will account for the presence of microbes and their derivatives in purulent internal collections, where there is no exposure to the air. The definition of inflammation, formulated by Hueter in his *Grundriss der Chirurgie*, though differing fundamentally from the classical definition adopted by surgeons generally, in the light of modern progress is certainly very suggestive. Inflammation, according to this eminent authority, may be considered in general as an epidemic at once miasmatic and contagious in its nature, which exerts its ravages over almost the entire surface of the earth,—that is to say, in every place where putrefaction is produced by inferior organisms, which, according to place and circumstance, modify its characters according to the quantity or the quality of the organisms present. By this it is not necessarily meant that the germs of putrefaction and those of inflammation and suppuration are essentially identical, but their laws of development are in some degree the same. What may be the special forms of microbes (if there be special forms) which are apt to create inflammatory or purulent foci, remains for further study.

The fact that such a theory of inflammation can be advanced is in itself significant: it is another instance in which the study of pathology has been stimulated by the new doctrines of the origin of disease, and shows that the germ-theory, so far from becoming obsolete, is becoming day by day more firmly established.

A FEW weeks since, we called the attention of our readers to some vile compounds which are described in the Homœopathic Pharmacopœia recently published by Boericke & Tafel, of this city,—the gonorrhine, leucorrhine, and other nasty filth put into the mouths of dupes by crack-brained practitioners of medicine. We did not, however, note one other fact, because we wanted to wait until a legal decision had stamped the fraud as fraud. The remaining portion of the Homœopathic Pharmacopœia was in great part stolen verbatim from the United States and National Dispensatories. After a very brief suit, the whole edition has been suppressed under the copyright laws. The publishers probably thought no educated regular physician would ever see their book, and that they would escape un-

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whipped of justice; but was there ever a more telling proof of the impudent fraudulence of the assumptions of modern homœopathy than the fact that for the guidance of its votaries the leading business firm devoted to such specialty should provide stolen extracts from recognized standard scientific therapeutic treatises?

MANY years ago the writer of this paragraph was a resident physician in Pennsylvania Hospital. Fourth-of-July nights were in those days a surgical jubilee or orgy for the residents. Torn hands, lacerated fingers, gunshot wounds, burns, *et id hoc omne genus* abounded, and were usually left for their first treatment to the internes. On such a night the fire fed by the vapor of ether leaped from a candle through the air six feet to the freshly-saturated sponge applied to the mouth of a victim of minor fireworks, and in a moment sponge, insensible patient, bed-clothes, etc., were in a blaze. Fortunately, the fire was extinguished without serious injury; but the canaille, who flocked in with their wounded friends, spread far and wide the report that the young doctors were all drunk. So much of prelude to the information we vouchsafe our readers, that the editorial staff of the *Philadelphia Medical Times* was not under the influence of champagne when it wrote recently, "372,000 pounds of opium is equal to 3,000,000 of doses."

CORRESPONDENCE.

LONDON LETTER.

ALL your readers will learn with regret that Sir Thomas Watson has passed away. His charming lectures on the Practice of Physic are a part of medical education. They may not be quite abreast the requirements of the day, as the modern progress of medicine has been swift, and in the direction of the nervous system that progress has been immense. But there are a great many maladies that have been fairly understood for a long time, and on these Watson's book can be read with much profit and advantage. The writing is that of an accomplished scholar; the reasoning, clear and lucid. Sir Thomas was a graduate of Cambridge in 1825. Next year he was made a Fellow of the College of Physicians, and he served the offices of Councillor and Censor, each several times, till at last he was elected President of the College. He was first a lecturer on medicine at the Middlesex Hospital, but was induced to join King's College, where he became Professor of Medicine. His exquisite lectures were delivered with a master's grace of manner and felicitousness of expression. Then Sir Thomas was made a Fellow of the Royal Society, as befits the President of the College of Physicians, just as it does a Cabinet Minister. He was also made a physician-in-ordinary to Her Majesty; but whether he was ever in actual attendance upon the queen is doubtful. He was one, and no unimportant, link in the chain of medical baronets of whom the present generation knows something. There were Sir Everard Home, Sir Charles Scudamore, Sir Henry Holland, Sir James Alderson, Sir Thomas Watson, and now Sir William Jenner, last but not least. They form a string of names of which any profession may be justly proud. Most of these held the position of physician to the sovereign.

With Sir Thomas Watson passes away a phase of medical history which has seen very important advances. During his long history medicine has emerged from an empirical art into an acknowledged science. He was an M.D. before the knowledge of the discovery of the stethoscope by Laennec, and all that it involves, had taken root in England. The systematic study of the sounds produced by the various organs in health and disease was unborn when the late baronet was a Fellow of the Royal College of Physicians. He lived to see medicine employing instruments of precision in all directions; and an honorable life it was. No one ever dreamt of Sir Thomas as acting otherwise than as a polished gentleman with a nice sense of honor. For some years he had retired from practice, and only appeared before the public on special occasions. Yet he had not been forgotten even in the rush of modern times. The kindly, courteous old baronet could usually be seen on Sunday mornings, wending his way to and from his residence to the neighboring church in Vere Street; for he belonged to a class of physicians who do go to church, though the class is growing smaller.

If one well-known medical figure with the prefix of "Sir" has passed away, a new-made knight has been added to the list. Sir Oscar Clayton is a Fellow of the College of Surgeons of England of 1853. Beyond that he is Surgeon to the Prince of Wales and the Duke of Edinburgh, and was a surgeon of police, no one seems to know anything about him;

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but he has some claims to such distinction, doubtless, and a handle to his name will carry with it a definite value in practice from a financial point of view, but perhaps not very much, if the fees on this side of the Atlantic are to be arranged on the thrifty scale adopted in remunerating the medical attendants of your late murdered President.

Uncle Sam has been decidedly near on this occasion. It has, however, always been understood that by attendance upon exalted personages the physician finds his reward not directly so much as indirectly in the increased clientèle of ordinary mortals which follows therefrom. For instance, the Duke of Edinburgh had a cold,—a simple, feverish cold,—and his medical attendant in the country (it would be cruel to name him) feels it incumbent to sit up all night with his illustrious patient, and is rewarded by seeing a paragraph in the newspapers calling the cold a "serious illness," which is soon followed by another, informing Her Majesty's liege that Sir Oscar Clayton had been down from London and had approved the treatment adopted. The movement for the reform of medical education is once more assuming an active condition, and if it is necessary to get a medical knight down from London to endorse the management of a common cold, it is certainly high time something was done. What constitutes a claim for knighthood is growing more mysterious every day. It is some comfort to the Edinburgh colleges (not the University, be it understood), which have been so seriously sat upon by the recent Commission, that they did not license either of these gentlemen who have figured before the public in connection with a simple cold. Whatever their shortcomings,—and the charge brought against them is only too well founded in many instances,—their licentiates can encounter a feverish cold without much mental perturbation. Perhaps North-Countrymen possess a robust mental physique and are not easily put out; but the Scotch corporations did certainly get some severe handling about men who failed to pass in London going North and returning with a qualification. Yet a feverish cold would probably not be beyond their capacities even in their imperfect training under the existing regulations. It is the habit to gird at the "one-horse" colleges in the boundless West, where earnest young fellows get a smattering of medicine, surgery, and obstetrics, so as at least to prove useful and less dangerous than completely unlettered ignorance, in out-of-the-way places where a full-course M.D. would not think it worth his while to locate: so it may be interesting to know what goes on in the old country.

Prof. Huxley put the following question to a well-known private tutor who prepares candidates for examination, and who therefore sees a good deal of the "lame-duck" kind of student: "Is it not a matter of fact that a vast number of young men, when they come to their medical studies, cannot write a decent letter, and have not a notion of English composition?" Mr. T. Cooke, a pleasant, bright little man, who had no motive to tell a lie, answered, "That is the case." Well, if such is the case,—and it seems impossible to doubt it,—what is the use of so many well-meaning people making an outcry about the School-Boards and the over-education of the children of humble parents? We do not seem to be in any particular danger of over-education as yet, for is not medicine ranked among the learned professions? Hitherto one was laboring under the impression that preliminary examinations had closed the portals of medicine upon all idle ne'er-do-wells since the year of grace 1858. Before that, a young man who had tired out his long-suffering kinsfolk, and found it necessary to talk about "doing something for a living," betook himself to medicine, and ground up his Latin in the scanty spare time of his student-life; and sometimes years elapsed in these spare hours, when he had no money for billiards or other amusements incompatible with absolute impecuniosity, before he successfully surmounted the preliminary ordeal. This creature, one imagined, was as extinct as the dodo; but Mr. Cooke's answer gives one a rude shock as to the possibility of some specimens remaining in our social museum, and of a modern representative, not quite so pronounced, being indeed far from rare.

Then Sampson Gamgee, of Birmingham, took up his parable, and testified against the unhallowed alliance of the College of Physicians of Edinburgh and the Faculty of Physicians and Surgeons of Glasgow,—the most offending combination: "We know very well the Scotch colleges give the easiest examination. If a man is plucked here he can go there, and, to use a student's expression, bring his ticket back with him." He had consulted the Medical Register to refresh his memory, in order that there might be no mistake about his facts. Further he went on: "It has a most demoralizing effect on the students." And it seems that the demoralizing effect is not altogether confined to the students; for Mr. Christopher Heath, one of the foremost surgeons of the day, who has both taught and examined, delivered himself as follows in illustration of what occurs:

"I may mention one which occurred two years ago. A man was plucked the third or fourth time, at the primary examination of the College of Surgeons, in anatomy and physiology. He afterwards, at my recommendation, went to Glasgow, and came back with a double qualification." Now, Mr. Heath is a man of irreproachable character; but what will a sick layman think if he reads such testimony? Can he think that the public, who are to place themselves in the hands of these qualified practitioners, are being fairly treated?

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I am afraid such uncovering of the nakedness of our profession will bring forth a mingled crop from such mingled seed. The supporters of the movement for female medical practitioners will find here a weapon or two which can be furbished up to carry on the fight; for they are rather quieter than usual at present. It seems that a medical education does not eradicate all carnal weakness for matrimony in its cultivators, and some, having degenerated from matrimony further into motherhood, have been practically unfitted for the discharge of their professional duties from time to time. Such a result of higher education has been rather damping for the enthusiasts. Nevertheless, the belief in female capacity for physic is still burning brightly in some quarters, and it has been rumored that our gifted Postmaster-General, Mr. Fawcett, contemplates appointing a lady doctor to the post-office, where there are many lady officials. But the poor gentleman has been struck down by typhoid fever complicated with diphtheria, and we must wait till he sufficiently recovers to see what will be done. In the mean time, the bulletins about him are signed by Elizabeth Garrod-Anderson among others: so that anyhow he is setting an example for his male employés by being attended by a female practitioner. I had nearly written a practitioner of the inferior sex. Should it not now be "the superior sex"? The female is the equal of the male in all matters of life,—that is, all greater matters; and as the human male is not anatomically qualified for child-bearing or suckling, it seems questionable how far males are necessary in the scheme of creation, except purely for purposes of procreation. It seems that for this last purpose a limited number of males may be required. Polygamy was the condition of life suited to a sparse population, but polyandry with sexless workers (barren females) seems the arrangement shadowed out for a civilized and teeming population, in which the female is getting to the front in other directions as well as in the production of fiction.

There is only one other direction, apparently, in which female energy can strike out, and that is the Church. The mandate of Paul was set at naught by the Society of Friends and by the earlier Wesleyans, though female preaching has not been found acceptable to the bulk of the Christian Church. So, if a lady student of medicine fails, and there is no Scotch portal with an easy examination for her (as there is for the more fortunate male), she cannot take to the Church,—an alternative adopted by the male when convinced of his inability to enter the ranks of medicine,—but must fall back on domestic work or retail commerce. Surely theology is not a subject on which the female mind is indifferent; and I, for one, am certain that it must be quite as delightful to see a fair young curate, severely attired, visiting me and correcting my views about the Hebrew prophets, or expounding Revelation, as it is to see a shapely hand ungloved, and taper fingers feeling my tendinous radial artery, whose wall is hardened by commencing atheromatous change. It seems the lady doctor has been thought specially adapted for the harems of Mohammedans or the zenanas of the Hindoos; but even here her superiority has pet to be demonstrated, as the existing evidence is insufficient to establish it beyond question or cavil. Even when the native proprietor has become sufficiently "civilized" or "Europeanized" to permit of the experiment being tried, the prejudices of custom have been arrayed against the experiment.

Medicine, it seems, is once more having a chance at Oxford, where, under the chilling influence of theology of the most conservative character, it had all but died out. When the late Prof. Rolleston went to Oxford as Professor of Physiology, he was an enthusiast, as well as one of the foremost physiologists of the day. But his ardor died cut under the unfavorable climate, and he became an ordinary respectable Oxford professional mediocrity. He died of Bright's disease some little time ago, and "the lost medical school," as Oxford has been designated commonly, is now to be revived by the appointment of J. Burdon Sanderson to the Waynflete Professorship of Physiology. The Oxford wet-blanket clique smothered George Rolleston's energies: it now remains for us to wait and watch if they can perform a like operation on Burdon Sanderson. He is not a promising object, it must be admitted; and if they do succeed, it will be a piece of intellectual Thuggism most interesting to all psychologists. Nor, with his aid, will a similar operation on Prof. Moseley (of "Challenger" repute), Rolleston's successor as Linacre Professor, be easily performed, as he has a good intellectual backbone.

J. MILNER FOTHERGILL.

MEDICAL PRACTICE AMONG THE UTES.

UNITED STATES INDIAN SERVICE,
UINTAH VALLEY AGENCY, UTAH, November 29, 1882.

SIR,—I have thought that possibly some members of the medical profession would be interested in knowing something of the peculiarities of the Indian service, and this has occasioned me to review some of my notes, not with the hope of finding anything with which to instruct the profession, but merely to tell its members of some of the difficulties with which agency physicians have to contend,—to wit, "Indian medicine-men" and their practices. An Indian doctor is a man of influence in his tribe, and his services are sought on all occasions. He never forgets to charge, and the indebtedness is promptly

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liquidated by the patient or his friends. In the Ute tribe, so far as I have observed, but little medicine is used, and most of the doctoring is done with bass-drums, notched sticks, and noisy incantations. Imagine the feelings of an agency physician, on visiting an Indian lodge, to find his patient, on whom he has enjoined perfect quiet, being pommelled and sung over by a half-dozen "medicine-men," and, after the performance is over, being told that the patient was much better because one of the doctors had found the "pain" in the shape of a little red stick of a finger's length, and had extracted it from the ear, thorax, or abdomen! Of course there are instances when a placebo, in the shape of an invocation to unseen powers by an Indian doctor, will have the desirable effect of "bread pills" and "sugar pellets" in higher walks of life; but, as a rule, the patient is not materially improved, and either dies or applies to the agency physician to do his share towards hastening recovery.

When a patient is abandoned by the "medicine-men," and his superstitions prevent his applying at the agency for treatment, his case, if seriously ill, is a pitiable one. As an example of this, I was called one night to go eight miles to see an Indian who I was told was very sick. Upon inquiry, I learned that he had been suffering five days from retention of urine. I went to his lodge, and was there asked to accompany an Indian, who directed me to a lone tree about a quarter of a mile from any habitation, and there, to my surprise, I found my patient in the top of a tree, on a bed of willows, laid out to die if no relief came. After some deliberation as to whether it was better to die a natural death or take the chances of being killed by me, he consented to my passing a catheter and evacuating a bladder which had been distended to such an extent as to reach above the umbilicus. I have imagined, from the broad grin which overspreads his countenance whenever he meets me, that this Indian possessed a little of the gratitude with which the "noble red man" is credited; but I am still in doubt. For almost two weeks after my first visit, his bladder seemed to be in an atonic condition, probably the result of over-distention, and he was unable to empty it without assistance: so a catheter was used twice daily. About the close of the first week I was called away, and requested one of the agency employés to use the catheter and relieve my patient during my absence; but immediately upon my return the Indian informed me that if I was ever to be absent again he would prefer operating on himself. I gave him a little instruction and furnished him with an instrument, which he used as long as was necessary. But there is hope for the Indian, and I am firmly convinced that the agency physician will ultimately triumph over the native "medicine-man." The Indians at this agency at least are throwing aside many of their superstitions, as is proved by the fact that I held, during the present month, probably the only post-mortem examination ever made on a Ute Indian, for even the friends of the "enlightened" chieftain Ouray would not allow a post-mortem to be held. The case in question was one of acute alcoholism, which I recorded, not because it was the only case of drunkenness during the month, but because it resulted in death, and was of interest from the fact that the Indians allowed me to make a post-mortem examination and have the body buried in a coffin, which is entirely contrary to their creed. Whiskey, post-mortems, and coffins might all be termed evidences of civilization, but the consent of the Indians in this case is a marked evidence of their improvement, for their prejudices and superstitions would have rendered such a proceeding impossible a few years since, and these superstitions are among the strongest relics of barbarism to which they cling. Less than fifteen years ago the Ute Indians, upon the death of a prominent member of the tribe, were in the habit of killing the wife or servant of the deceased, to accompany him, erect his lodge, cook his victuals, and saddle his horse, if such things were necessary, in the land whither he had gone; and now they seldom fail to kill horses, burn lodges, and destroy property whenever a death occurs. Probably one of the greatest drawbacks and objections to the erection of hospitals at Indian agencies is the fact that after a single death had occurred in the building it would be difficult or impossible to secure any further patients. In the case above referred to, all these practices were omitted; I believe not a single horse was killed; and this Indian, according to the superstitions of his people, is doomed to eternal pedestrianism in that "happy hunting-ground."

F. S. BASCOM,
Agency Physician.

NOTES FROM SPECIAL CORRESPONDENTS.

MICROSCOPY AMONG THE CINCINNATI MEDICAL STUDENTS.—The last few years have developed quite an increased demand for microscopical teaching in our colleges. Although the methods of making microscopical research have long been taught in the Ohio Medical College, it has only been within the last four years—since the laboratory has been under the charge of Dr. F. Kebler—that any considerable proportion of the students have pursued the course. Since that time, however, the number has been steadily increasing, and the addition of a pathological laboratory, under the direct charge of Dr. E. W. Walker,

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has given a fresh impetus to the study. This year more than one hundred and fifty students have taken these courses. At the Miami Medical College, Prof. Joseph Eichberg has lately opened a laboratory for microscopical work. He informs me that his classes manifest great interest in the work, and that this year one-third of the college matriculates are taking the course. As this study is wholly optional, the large number of students pursuing it indicates a greatly-increased desire for a thorough knowledge of the groundwork of medicine.

The colleges, as a whole, are not quite so well attended this year as last, but the students are doing more satisfactory work than they have ever done before.

Some of our most prominent physicians have started a private laboratory, in which they are studying germs and their causative relation to disease. They are doing a great deal of quiet work, the results of which they will doubtless give to the profession at no distant day.

ALCOHOL AS A SPECIFIC FOR SCARLATINA.—At the last meeting of the Academy of Medicine of Cincinnati, Dr. Giles Mitchell reported forty-three consecutive cases of scarlatina treated with large doses of alcohol, without a single death. The quantity of alcohol given in some cases was enormous. To a patient two years old a half-ounce of whiskey was given every hour for a number of days, without having any other than a favorable effect, and without producing any symptoms of alcoholic intoxication. The doctor claimed that when this treatment was instituted, the disease had always pursued a more favorable course, hyperpyrexia being neither so frequent nor so prolonged, nor were renal complications so likely to ensue. In case the kidneys became affected, the alcohol was still pushed, and the complication fully relieved. If the temperature was high before the administration of the remedy, it would rapidly fall below the danger-line after the treatment was instituted. The report of Dr. Mitchell called forth a lengthy discussion from the members of the Academy. Prof. Whittaker thought that the favorable influence exerted by the remedy was due to its antimycotic properties. He had no doubt that the brilliant results obtained were due to the antiseptic and parasiticidal properties of alcohol, as manifested in these cases by the destruction of the germ of scarlatina. Prof. Reamy was a firm believer in the efficacy of large doses of alcohol. He attributed its good effects rather to its influence in preventing tissue-metamorphosis, to its value as a food, and to its antipyretic action.

SMALLPOX.—Smallpox is gradually subsiding, there being less than two dozen cases now in Cincinnati. The City Councils are trying to abolish the Board of Health, as, they claim, its work has been very inefficient. Two saloon-keepers, two druggists, and one politician at present constitute the active membership of the Board.

THE SOCIETY OF THE EX-INTERNES OF THE CINCINNATI HOSPITAL will convene in that city on the 28th of this month.

PROCEEDINGS OF SOCIETIES.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

A CONVERSATIONAL meeting of the Society was held at the hall of the Society, November 15, 1882.

CASES OF NASAL AND PALATAL DISEASE.

Dr. Carl Seiler exhibited, first, a case of congenital cleft palate, in which there existed two large posterior hypertrophies springing from the posterior portion of the lower turbinated bone on either side, obstructing the posterior nares and making nasal respiration difficult. One of these growths had been removed with the Jarvis wire snare, while the other was still *in situ*. He exhibited the case because, on account of the cleft palate, the inspection of the naso-pharyngeal cavity was very easy, and the hypertrophies, which are so often found to give rise to the symptoms of nasal catarrh, were beautifully shown.

The second case exhibited was one of syphilitic ulceration of the hard palate and of the nose. In his remarks on the case, he stated that the treatment had consisted in scraping the roughened palatine bone with the burr of the dental engine, and then by daily packing the ulcer with iodoform. Under this treatment, together with the iodide of mercury given internally, the ulcer had diminished, and was progressing towards cure in a remarkably short time.

CASES OF MILD CONTINUED FEVER.

Dr. James C. Wilson called attention to the prevalence of a mild form of continued fever, of which many cases had fallen under his observation this autumn. Similar cases are, however, frequently observed at all seasons of the year, but they are not in all cases understood, confusion arising in consequence of the misuse of the term "typho-malarial" as applied to certain not well-characterized fevers, and in consequence also of the wide departure separating cases of this kind from the typical forms of the fever with which they are nosologically related.

To illustrate the matter at hand more fully, Dr. Wilson related two cases. The first case, a lady, æt. 35, was first seen at his office on the 4th day of September. This person had spent the month of July at various places of summer resort, but the month of August at

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her own home in West Philadelphia. She had been in good health until about the end of August, when she had suddenly a distinct chill, not severe, followed by prolonged severe headache, but not by subjective symptoms of high fever, nor by sweating. Similar seizures of chill, followed by headache, occurred daily for four days, though not at the same hour. When seen, she was languid and evidently sick. Temperature, 102° at 4 P.M. The attack was looked upon as an intermittent of blurred type, and a mercurial purgative was prescribed, to be followed by large doses of quinia, along with gelseminum. When again seen at her home, four days later, she was no better. Temperature, 102.2°, headaches more severe, bowels constipated and only moderately acted upon by the purgative. From this time the patient continued to present the same symptoms, the chills becoming less and less distinct and more irregular, until in the course of ten days they ceased altogether. As soon as systematic temperature-records could be kept, the nature of the sickness became apparent, despite the absence of bleeding at the nose, diarrhœa, enfeeblement of the first sound of the heart, tympany, or rose spots. It was a mild attack of enteric fever. (The temperature chart was exhibited.) Under the so-called specific treatment, the case progressed favorably, its whole duration being about six weeks, the convalescence being delayed by crural phlebitis of the left side, which developed in the course of the fourth week and must be regarded as of diagnostic importance. Although this case presented the clinical characters of an irregular quotidian ague, its progress and the graphic record of the course of the febrile movement showed clearly that it was neither intermittent nor remittent fever. Furthermore, the husband of this patient had died of enteric fever, in the room occupied by the patient, eighteen months before. The probability of infection after a long period of time from disease-germs retaining their vitality in some favorable situation in the house is, in this case, very great. This case belongs to the group of cases to which the misleading term "typho-malarial" is commonly applied. If this term is used under the delusion that it designates a class of fevers distinct from those due to marsh miasmata on the one hand and those due to the specific cause of enteric fever on the other, it becomes at once the source of much danger, because such cases are usually atypical cases of enteric fever, and if not recognized the patient may suffer serious ill in consequence of the neglect of dietary precautions and the like, and his friends may suffer later on by reason of an improper disposition of the stools.

The second case, a lad 15 years old, passed the three summer months in the mountains of Pennsylvania, in a non-malarious place. September 9, the day before his return, he had a chill, which was followed by great headache, peevishness, but no sweating. Dr. Wilson saw him a week later: he had suffered from nearly continuous headache, with a daily slight chill, not followed by perspiration, and recurring at irregular intervals. The boy was not very sick: there was no delirium, dry tongue, tympany, or diarrhœa,—on the contrary, constipation existed. Throughout the case the temperature did not exceed 102°, and commonly attained only 101.5° in the evening: it did not, however, fall to normal until four weeks had elapsed. After a few days the chills ceased, and only in the fourth week, about the time of the defervescence, did sweating take place, and then at night, and of moderate amount. In this case, which lacked every other character usually met with in typical enteric fever, the characteristic rose spots were found upon the chest and between the shoulder-blades.

Careful inquiry developed the fact that at the place where the boy had been four or five mild cases and one fatal attack of "fever" had occurred during the season; that the previous season some cases of similar character had occurred, and that the place had been free from sickness until three years ago, when a patient already affected with enteric fever was brought there and died. No malarial element could be derived from this locality, and the case reported by Dr. Wilson was not typho-malarial, but mild typhoid or enteric fever, the chills being in all probability an irregular result of the action of the typhoid poison.

The study of these and similar cases is important, because, as already pointed out, they constitute an obscure form of an infectious disease, on the proper recognition of which may depend not only the safety of the patient, but the protection of the surroundings from dangerous unrecognized infection. Further, it must be noted that we cannot describe these cases as typho-malarial, whether we interpret that term as meaning a combination of typhoid and malarial fevers, or as malarial fever of low (typhoid) type, In fact, this term typho-malarial is a bad one, and should be abandoned. If the cases detailed in this connection were not typhoid fever, then they were instances of fever of a form for which there is at present no nosological place.

DISCUSSION ON MILD CONTINUED FEVER.

Dr. Mills said he had seen a number of cases which corresponded closely to the description Dr. Wilson had given; and, although it was true that typhoid fever might vary, he did not feel satisfied that they were typhoid-fever cases. A patient has just left his hands whose clinical history agreed closely with that of one of Dr. Wilson's cases; but it was a third attack of the disease. The patient had chills, followed by fever, sometimes high, sometimes low. The attack lasted three or

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four weeks. He thought the etiological argument adduced by Dr. Wilson not of much force. He wished to know if any records exist of fatal results in these cases due to errors of diet or intercurrent conditions. He regarded the cases as malarial rather than typhoid; but the inquiry was of much importance.

Dr. Eskridge said that the cases were of a kind of which most practitioners saw a great many instances. Continued fever varied much from typhoid. He had seen from time to time cases of a kind of fever which in his notes he was accustomed to call "cerebral typhoid." A case of this character had recently been presented at St. Mary's Hospital. The patient had suffered from an intermittent fever for about a week before coming to the hospital. The day after his admission, delirium occurred, followed by unconsciousness; the pupils were equal, and no paralysis appeared, but the condition became rapidly worse, and soon presented every sign of impending death; but the following day he became rational, the temperature fell, and great improvement took place. He is now at work, and feels well, but still has fever, although he was sick one week before coming to and three weeks in the hospital, and three weeks more have elapsed since he left the institution, making seven weeks in all. At first no sweating occurred, but at present night-sweats exist, and a slight febrile rise, without head-symptoms, occurs. Other varieties of cases he had seen, in which congestion of the lungs, followed by slight and gradually increasing solidification, took place, this solidification not disappearing until the fever terminated. Congestions also occurred in other organs. The variety that he called cerebral he had noticed in persons who, not accustomed to out-door exercise, had taken a summer vacation in the country or at the seashore and had been exposed to the sun.

Dr. Arthur V. Meigs remarked that Dr. Murchison, in his classical work upon the continued fevers of Great Britain, says that the differential diagnosis between typhoid, or, as he names it, pythogenic, fever and remittent malarial fever is one which it is sometimes impossible to make, and, further, that in India it is only of late years that typhoid fever has been recognized at all, owing to the prevalence in that country of remittent fever, with which it was confounded. The patients whose histories Dr. Wilson narrated had almost certainly both suffered with typhoid fever, this being almost proved in one case at least by the occurrence of crural phlebitis, which is a well-known and not uncommon complication of the later stages of typhoid, but must be rare in malarial fevers. The irregularity of the fever in the cases under discussion would be most easily explained—and it is a rule of logic that, other things being equal, the simplest and most natural explanation of any doubtful matter must be accepted as the correct one—by the existence of a malarial complication. This malarial element is a well-known and common complication of the disease, and has given rise to a special name,—typho-malarial,—which, by the way, is a very bad one, for it means in its true signification a malarial fever of a typhoid type, which the disease is not, being merely the occurrence of typhoid fever in a person having the miasmatic poison existing in the system at the same time. He detailed the history of a patient who was in the Pennsylvania Hospital during the past summer, when a diagnosis could not be made with certainty until, about the fourteenth day, the occurrence of intestinal hemorrhage established the existence of typhoid fever, and next day, for the first time, the characteristic rash made its appearance. The irregular type of the disease in the case was evidently due to the miasmatic poisoning with which the history of the patient showed him to be suffering. In another case, the patient, having a clear history of malarial disease, had only a few days before his admission to the hospital come from a distance, being exposed all the way to many hardships, and after his admission the disease assumed much more the appearance of remittent than of typhoid fever. Before death, however, which occurred about a week after his coming into the hospital, a probable diagnosis of typhoid fever was made, although many of the symptoms were wanting. A post-mortem examination showed extensive ulcerations of the patches of Peyer, a much enlarged and deeply-pigmented spleen, and the bronze pigmented liver, which is characteristic of severe miasmatic poisoning. There was a curious deficiency in this case, probably congenital: the left lobe of the liver was wanting. The most satisfactory and easy view of Dr. Wilson's cases was to regard them as having been typhoid fever, probably with a malarial element existing explaining the irregularity of the type of the disease. This latter was not absolutely necessarily the case, for typhoid fever may be irregular in type and yet uncomplicated.

Dr. Mills desired to say that he thought that no doubt could arise as to the typhoid character of Dr. Wilson's second case; but as to his own cases he had great doubt. These cases had presented chills alternating with fever, no diarrhœa,—bowels, in fact, rather constipated,—and no rash. They yielded to a line of treatment and diet not suited for typhoid. He did not accept the supposition of association of malarial and typhoid fever in the same patient. It was unlikely that two definite forms of infection should develop at one time. The periodicity of these fevers was supposed to indicate malarial impression, but might be accounted for by the fact that purely cerebral trouble was liable to periodicity. Dr. Eskridge's case, which early

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presented head-symptoms, was *apropos* to this point.

Dr. L. Turnbull had a few weeks ago been called to see a young lady, æt. 18, whose case had been ushered in with intense headache, slight chilliness but no distinct chill, pulse 140, and high temperature (104°), but no rose spots, iliac tenderness, sudamina, or albuminous urine. She had just returned from Mount Airy, near Chestnut Hill. Upon inquiry, he learned that the gardener employed at the house adjoining the one that she lived in had died of typhoid fever. The young lady's disease was at first thought to be malarial, but quinine did no good. As soon, however, as he began with port wine and supportive measures, the temperature went down, the nocturnal delirium vanished, and she began to improve. He felt satisfied that the case was one of typhoid fever, although rather remarkable in its clinical history.

Dr. Wilson, in closing the discussion, said he had recently met with a case of death from peritonitis in a lad whose family had taken possession of a house which had been vacant for some years. An exceedingly foul well in the yard had been cleaned after the house was occupied. About twelve days before Dr. Wilson had been called in, the lad had become listless and indifferent, but had continued his school-duties for some time. Headache developed, and finally he was seized with a sharp pain in the abdomen, produced by the peritonitis, of which he died.

The eruption of typhoid fever is often absent even from those parts of the body in which it is most likely to occur: in as high as twelve per cent. of the cases it is said to be missing. It is true that irritative fever may run on indefinitely and be attended by periodicity, and that certain subacute forms of cerebral disease may show periodicity. As to typical remittent fever, such as was common in this city thirty years ago, it is rare. He had never seen any cases except those brought from shipboard. He recognized that typhoid fever is often complicated by malaria, thus acquiring periodicity; but here and there a case shows a periodicity which belongs to enteric fever itself. The lad spoken of in his opening remarks had no malaria: he had not been in a malarial region. He had detailed the cases to show that typhoid fever could exist without any of the characteristic symptoms being presented. If this is not the case,—that is, if such cases are not examples of atypical typhoid,—then a fever exists which is still unclassified and unnamed. The cases were assuredly not catarrhal fever, nor intermittent or remittent fever, nor simple continued fever. They were undoubtedly typhoid or enteric fever.

RARE FORMS OF ANEURISM IN THE CAROTID ARTERY.

Dr. Charles S. Turnbull exhibited two cases illustrating rare forms of traumatic aneurism of branches of the carotid artery.

Case I. was a *pulsating exophthalmus* of the left eye, due to *aneurism of the ophthalmic branch of the internal carotid*. By extension, the ophthalmic, from its anastomosis with the angular, and this, in turn, from its anastomosis with the external maxillary, had become dilated. In these vessels the aneurismal thrill could be felt as far as the infraorbital notch. Firm pressure on the *common carotid* of the same side *controlled the pulsation, but did not affect the exophthalmus:* so that an aneurism about the region of the *cavernous sinus* was suspected, as also some venous intercommunication.

The case had been under his observation for more than eight years, and, beyond the disfigurement and annoying "pulsating tinnitus," no change had taken place either in the exophthalmic eye or the health of the individual. Vision was unimpaired, and in the dark (especially when walking or making any exertion) pulsating coruscations were blinding and interfered with locomotion. Compression of the left common carotid afforded intense relief, but, when removed, the shock was absolutely painful, and the column of blood invariably "lifted the patient to her feet." Some ten years ago, while in the act of assuming the upright posture, after stooping, patient received a blow "on the orbital region" from the open door of a cupboard. The blow was scarcely noticed at the time, but after retiring, about five hours later, and having taken her first nap, she awakened with the pulsating noise, which has continued incessantly ever since. With the stethoscope the noises can be heard anywhere over the cranium, and with the otoscope in the meatus auditorius the noises are loudest, and can be likened to those of a "tug-boat" under full steam. She is 52 years of age, is the mother of eight children, and is a remarkably strong and healthy woman. Ligation of the left common carotid—a dangerous procedure in this case—is the only measure recommended for absolute relief, and the use of digitalis and bromide of potassium, with rest, the only palliative means of any avail. By pressure of the dilated angular artery, the lachrymal duct of the side has been mechanically closed, and this "stillicidium" adds another complication to the already oppressed globe. With the ophthalmoscope venous engorgement is pronounced.

Case II.—Traumatic aneurism of the temporal and anterior auricular arteries, supposed to have been caused by the point of a scalpel, as used about six months ago in incising a furuncle of the auditory meatus.—A healthy Irishwoman, æt. 55 years, came complaining of a pulsating noise in the right ear, which she said had annoyed her "since the operation was done upon her ear." With the stethoscope the "tug-boat" noise could be

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heard over the ear and the temporal region of the side, and with the otoscope in the auditory meatus the sounds were quite as loud as those heard in Case I., and equally annoying. Compression of the *external carotid* at the angle of the inferior maxilla completely controlled the pulsations. In both cases the pulsating noises (aneurismal thrill) were so loud that hearing was seriously impaired, and special arterial compression in both cases completely restored the hearing. Ligation of the external carotid was proposed as the quickest and most satisfactory method of treatment.

In Case I. there was an *indefinite* history of trauma, but in Case II. the operation upon the meatus was no doubt to blame, and, as a point in aural surgery bearing upon the treatment of furuncle, serves as a valuable hint to those who would recommend the free use of the knife. Dry heat locally and the liberal use of anodynes are to be preferred to the knife.

DISCUSSION ON ANEURISM.

Prof. Henry H. Smith expressed himself much interested in Dr. Turnbull's cases. The diagnosis was clear, and the history of the first case frankly detailed. The treatment of the second case was not a matter of difficulty or uncertainty. In the first case, however, ligation of the carotid, with the intention of relying upon the vertebral arteries for the brain-supply, would probably lead to a fatal result. The progress of the case will be slow, and, when the hemorrhage occurs spontaneously, it may not prove fatal. The destruction of the eye and caries of the orbit will probably ensue on the growth of the tumor.

Dr. J. B. Roberts, referring to the second case, said he had examined it only a few moments ago, but he would prefer attempting digital compression, or a clamp fixed around the back of the neck, before resorting to the ligation suggested by Dr. Turnbull. Dr. Turnbull had probably rejected these methods for good reasons derived from more extended study of the case. It might be noted that the patient herself could easily use digital compression. However, ligation of the external carotid at this point was not a very risky operation.

Dr. Risley agreed with Dr. Roberts as to the treatment by digital compression. In the spring of 1881 he saw, in the interior of the State, a young lady who had extreme exophthalmus from a tumor of the orbit. She had consulted a surgeon, who examined the tumor with an exploring needle, but Dr. Risley did not learn what diagnosis was made. On examining carefully, he detected the aneurismal thrill and bruit, her physician, Dr. M. L. Herr, who was present at the time, confirming the observation. Arrangements were made to see the young lady in the city, but before leaving her he made pressure on the carotid, during which the thrill was suspended, but the occurrence of faintness made him desist. Some time afterwards she came to the city, but he then could detect no thrill. Dr. Agnew was called in consultation, and, after a careful exploration, a tumor about the size of a hazelnut was found situated far back, lying between the superior and internal rectus muscles. No fluid escaped. Dr. Risley concluded that the pressure he had used on the first occasion had been sufficient to form a clot in the sac, and he stated to the patient that the exophthalmus would probably diminish. A year afterwards he learned that the eye had retreated to its original position, but that the cure was ascribed to various herbs which had been used by an old woman who had been consulted by the young lady.

Dr. L. Turnbull said that in March, 1874, he read before this Society a paper on *tinnitus aurium*, and in that he detailed a case similar to the rare and interesting ones shown by his son. The patient was a male, and upon examination he had found the aneurismal thrill. He had stated in the paper that in many of the cases the calibre of the artery was diminished, a sort of stenosis occurring; sometimes a true aneurism existed. The vessels affected were generally external. We can feel the increased impulse by putting the fingers in the ear. *Tinnitus aurium* is often attributed to heart-trouble, and the patient becomes much alarmed. The condition can be relieved in various ways. So also any interference in the vertebral, or, still nearer, the internal auditory artery, changes the flow of blood to the labyrinth, and hence the vascular supply of the internal ear must also be affected. The intralabyrinthine fluid is thus impressed, and this may and does often give rise to palpable noises which are synchronous with the diastole of the heart and may be heard with great distinctness.

Dr. Turnbull had recommended the use of compression in the second case shown by Dr. Charles Turnbull this evening.

Dr. C. S. Turnbull said, in reply to the various remarks, that in the second case he had to choose between two methods of treatment,—*i.e.*, compression and ligation of external carotid,—and he had adopted ligation as the quicker and simpler plan. He would not depend upon mechanical compression. It was difficult on account of location, and he was somewhat afraid that clots might be allowed to get through by accident. He had controlled many forms of *pulsating tinnitus*, as accompanying aural disease, by compression of the common carotid, but he had seen such bad effects therefrom, several patients having fainted, that he had become afraid of the practice and had resolved to resort to it with extreme caution. He, however, proposed, in the second case, attempting compression by some sort of mechanical appliance, and promised to report the results.

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REVIEWS AND BOOK NOTICES.

THE DISEASES OF THE LIVER. By GEORGE HARLEY, M.D. P. Blakiston, Son & Co., Philadelphia. [By arrangement, simultaneous with the London edition.]

This is one of the freshest, most readable, and most instructive medical works that have been laid upon our table during the present decade. As the odor of fish hangs forever about the person of a battered, shrivelled-up Cape Cod veteran, so in the personality that stares at us from every page of Dr. Harley's book prominently comes forward the peculiar reek of the physiological laboratory. Dr. Harley is a clinician who has seen very much of what he writes, but first he was a practical physiologist and learned to use his eyes and brains,—a lesson the pure clinician rarely acquires thoroughly.

Part of the charm of the book is no doubt in the style of the author, which in the present case is equivalent to saying, is in the author. Where the Harley pedigree reaches, we, of course, know not; but assuredly some old Berserker swooping from his Northern eyrie left his permanent impression in some fair Saxon maid, or perhaps settled for life upon shores hospitable because he made them so. The robber nation of the modern world is undoubtedly the English. As they smote the French at Crecy and Agincourt, so ever since, by fair means or foul, have they been smashing, crushing, appropriating, drinking, and breeding, until the world belongs to them and their offspring. An Englishman of Englishmen would Dr. Harley seem to be. His champagne, he tells us, is A 1. Much has he to say as to what wine people suffering from liver-disease should drink. Never does it seem to occur to him that it is possible to exist without alcoholic imbibition. Herein he fulfils the definition which has been given of an Englishman by a well-known physiologist, as "a man who is always drinking something out of a bottle;" but Dr. Harley does not put his trust in zoedone, or ginger-pop, or other futile compound with which the temperance Englishman fulfils his destiny.

Then, when he is reasoning about a subject, how with mighty sweeps of a broadaxe hews he his way to the centre of the matter! Most of that which is said is very good, but now and then a most attractive *non-sequitur* is thrust forward. Whether writing sense or nonsense, however, the author rages and dogmatizes with a power that must sweep the ordinary reader along with him. There is no conscious egotism, but an immense courage of opinion and a practical belief in his own infallibility, which, of course, would be denied by Dr. Harley, but which the reader will everywhere perceive.

The good things of the volume we dismiss summarily with the statement that we know of no medical monograph which it will pay the practitioner better to buy. Some of the shortcomings we will point out briefly. Thus, when discussing the effects of tea and coffee, Dr. Harley falls into the astonishing but common error of asserting that their active principle is one, thein or caffein. We have known just such an assertion brought forward by a very well known therapeutist as an argument against the physiological school of therapeutics. "Two things," says this apostle of the old therapeutics, "which the scientist affirms are one; and yet how differently they act!" In truth, coffee depends for its activity chiefly upon empyreumatic oil, which during the roasting is developed from caffein, but has different physiological powers. Another instance of Dr. Harley's *non-sequiturs* may be found on page 322, where he cites an anecdote as showing that the toxic agent of certain poisons is not connected with their odoriferous principles. A Dr. M—— has a peculiar idiosyncrasy towards prussic acid, so that he is made ill by the emanations from a tightly-corked bottle in a closely-closed cupboard. The oil of mirbane smells so exactly like prussic acid that Dr. M—— cannot distinguish between them, but he is not made ill by the oil of mirbane,—"proof," says Dr. Harley, "that the toxic property of prussic acid does not exist in its odoriferous principle"! Proof of no such thing; proof only that two things which the nose cannot distinguish between may be essentially different. The nose cannot distinguish between a brick and a diamond, therefore the diamond is a brick. Nevertheless, we doubt whether the loyalty of Mrs. Dr. H. to her spouse would lead her to wear a brick in her brooch at the queen's reception.

A serious error arising from the same logical fault occurs in the discussion of the nature of fever. Dr. Harley brings forth almost as a new fact the notorious circumstance that in some cases there is a post-mortem rise of temperature, and asserts that this proves that the nervous system has no direct influence upon the production of fever. Of course it proves no such thing. It proves only that certain chemical changes or processes set up during life may continue after death. Modern research shows that it is the withdrawal of the inhibitory power of nerve-influence which causes fever. Death certainly withdraws nerve-influence; but fever usually subsides because the chemical movements of the protoplasm cease. If a putrefactive fermentation has commenced before death, it may continue after the cessation of circulation. The theory put forward by Dr. Harley, that the rise of temperature is due to the heat produced directly by the rapid development of the disease-germs,—produced, in other words, by the germs themselves,—is sufficiently comical for a Punch and Judy show.

In conclusion, we commend again most

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heartily Dr. Harley's extremely valuable book, whose faults are so closely connected with and so completely overwhelmed by its virtues.

GLEANINGS FROM EXCHANGES.

A NEW THEORY AS TO THE PATHOGENY OF RHEUMATISM.—In an article entitled "Rheumarthritis, Carditis, and Chorea, with a New Theory of their Unity of Origin," Dr. W. Stewart, of Barnsley (*British Medical Journal* for November 11), broaches an ingenious theory with regard to the causation of these associated affections, that agrees apparently with many of the clinical features which have been hitherto unexplained. The central idea in his hypothesis is that the lesions termed rheumatic are due to a primary disorder of the blood or of its constituents, and that this offending agent is a white blood-cell in a pathological condition due to partial devitalization, somewhat analogous to tuberculosis and pyæmia, which he regards as merely greater degrees of devitalization of these cells. The most prolific source for these rheumatic leucocytes is in the tonsils, which are frequently observed to be inflamed prior to the appearance of the other symptoms. Either class of phenomena—arthritic, cardiac, or nervous—may precede the others, or occur independently of them; that is, it is not necessary that the joint-inflammation shall precede the cardiac disorder, or that the latter shall precede the chorea. A number of clinical cases are quoted illustrating the occurrence of these phenomena after preliminary sore throat. There is a species of tonsillitis which is supposed to be typical of this form of disease, and it so closely resembles diphtheritic sore throat as to be often mistaken for the latter: indeed, it probably furnishes the cases of diphtheria that are cured in three or four days. Like diphtheria also, it may be caused by sewer-gas poisoning. The following are the prominent diagnostic features of this sore throat: onset sudden, with shivering, malaise, and prostration; on the next day pretty high fever and sore throat; several spots of yellowish exudation may be found upon one swollen tonsil, and the next day the other tonsil will present a similar appearance, but is generally less severe in its course. This is a follicular exudation, and not a diphtheritic false membrane; the spots rarely become confluent, and usually clear away about the fourth day, when defervescence is complete and convalescence begins. The grave cases may be further distinguished from diphtheria by the entire absence of enlarged glands behind the angle of the jaw. The subsequent history of the affection will confirm the diagnosis. In very mild cases the throat-symptoms may be so slight as to be overlooked by the patient. The exudation under the microscope presents the characteristic features of leucocytes, but not of true pus-cells. The devitalized cells from the inflamed tonsils are carried off by the blood, and produce local troubles in joints, heart, or brain. The multiple thrombosis of chorea may be caused entirely by these leucocytes occluding the finer vessels in the corpora striata and adjacent motor region. In this manner arterial and capillary repletion is caused, and subacute inflammation may result. Defective nutrition and impaired function follow this condition.

The relation of the cell to rheumatism is merely that of an exciting cause. A chill of the surface affects principally the capillaries of the fibrous tissues surrounding the joints, because here there is a nearly total absence of that subcutaneous fat which acts as a non-conductor of heat over the other parts of the body. The cold produces contraction of these capillaries, thus establishing a condition which favors the blocking of their calibre by the altered blood-corpuscle. Fright similarly causes contraction of the cerebral capillaries. The following is a *résumé* of the views upon the subject as presented by Dr. Stewart. 1. Follicular tonsillitis, by the process of a mild inflammation, originates the discharge of altered white blood-corpuscles, through the follicular openings on the tonsils. 2. These, or others in the tonsils not extruded, are reabsorbed into the blood by the lymphatic vessels through the glands at the angle of the jaw. 3. By the initial inflammation, the white blood-corpuscles are deprived, to a certain extent, of their normal physiological qualities; and to the same extent as they have been devitalized they acquire pathological properties, by virtue of which they have an intensified tendency to adhere to the inner walls of the capillaries and to one another, and also to pass through the capillary walls into the connective tissues, and there form deposits. 4. They in this way become pathogenetic cells, and produce disordered nutrition and perverted functions in those organs in which they are interrupted or extruded, and thus establish the phenomena of disease. 5. These devitalized cells are revitalizable, and therefore the diseases which they produce, as a rule, terminate in recovery. He claims that this theory explains the altered blood condition observed in these affections (which is established by repeated absorption of cells or by the individual cells communicating to other cells they meet in the blood the same impress which they have already received); it accords with the apparent origin of rheumarthritis from damp and cold, and of chorea from fright, by according to them the power only of acting as exciting causes; it does away with the necessity of a causal connection between any members of the group; and, finally, it explains, in a rational and probable manner, the known clinical connection between, and the morbid anatomical condi-

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tions existing in, the various diseases of the group.

CONGENITAL RHEUMATIC FEVER IN AN INFANT SUCCESSFULLY TREATED WITH SALICYLATE OF SODIUM.—The following remarkable case is contributed by Dr. Pocock to the *Lancet* (November 11). During an attack of acute rheumatism a woman gave birth to an eight months' child, which she was unable to nurse on account of her condition. Twelve hours after its birth the child cried so much that the doctor was sent for, who found it feverish (temperature 103.5°), the moist skin having an acid odor, and the right shoulder and elbow were reddened, swollen, and evidently very tender on motion. Salicylate of sodium, in four-grain doses, given in sweetened water every two hours until six were taken, was administered until the pains seemed less; then only every four hours. However, as the restlessness returned, and the temperature rose to 104°, the remedy was now given every two hours for four doses more, and then the interval increased to three hours. By this time (about forty hours from birth and twenty-eight from commencement of treatment) the temperature had fallen to 101° and the pulse to 140. The interval between the doses was gradually increased until they were given only three times a day. When about one hundred and eighty grains had been taken, and the child was nine or ten days old, the drug was stopped for twenty-four hours, but afterwards resumed irregularly, two or three doses daily, for a fortnight. The temperature was down to normal on the eighth day, and did not again rise. Cod-liver oil inunctions were subsequently used, and occasionally a little mercury and chalk. No nervous or cardiac symptoms were observed. The case is thought to be unique: it certainly is calculated to inspire the profession with more confidence in the salicylate of sodium treatment for acute articular rheumatism.

THE HYPNOTIC VALUE OF TANNATE OF CANNABIN.—Dr. Fronmüller, of Fürth, has been investigating the properties of a preparation of Indian hemp, the tannate of cannabin, which he obtained from Merck of Darmstadt. The tannate of cannabin is a yellowish-brown powder, insoluble in water or ether, slightly soluble in alcohol, and easily dissolved in water made slightly alkaline. It has a taste like tannin, and a not unpleasant smell. In the distillation of Indian hemp, two volatile oils are developed, cannabin oil and its hydrate. These are rapidly-acting irritant poisons. They are said to be removed in the preparation of the tannate. Dr. Fronmüller states that he has used Indian hemp itself for thirty years, and that there has been a steady increase in the strength of the preparations furnished him. Thus, thirty years ago he began with a dose of eight grains, ten years later he had to reduce it to four, and latterly to two grains. The dose of the present preparation, the tannate, ranges between gr. ii and gr. x, the most frequent dose being gr. v. The drug was used fifty-seven times in hospital and six times in private practice. The patients consisted of twenty-one men and forty-two women, for the most part between 20 and 40 years. Forty of them were suffering from phthisis; the remainder had different diseases, generally of a chronic nature. The common symptom in all cases was insomnia, and it was for its hypnotic effect that the cannabin was given. Good results were obtained in thirty-seven cases out of the sixty-three, and moderately good results in fifteen cases. It was called a good result when quiet and uninterrupted sleep came on within an hour after taking the medicine, the patient awakening with no toxic after-effects. In twelve cases no result was produced. Many of the patients had been taking opium. From the sixty-three trials thus reported, Dr. Fronmüller concludes that cannabin tannicum is a very useful hypnotic, powerful without being dangerous, and one which does not disturb the secretion or leave unpleasant toxic after-effects, if given in proper dose.—*Memorabilien*, July 21, 1882; *Practitioner*.

SUCCESSFUL NEPHRECTOMY.—Lawson Tait, in a woman 24 years of age, suffering with pyo-nephritis, made an exploratory laparotomy, but found the intestines so matted together over the diseased right kidney that the operation had to be abandoned. The left kidney, however, was ascertained to be unaffected. After recovery from the exploratory incision, which speedily followed, she left the hospital temporarily improved. She returned, however, about fifteen months later, in wretched health, with purulent urine, and all the former symptoms, for the purpose of having the kidney removed. A transverse incision was made along the curvature of the ribs, about four inches long, cutting carefully down to the fat, which was very abundant. The kidney was removed by the fingers, and its pedicle tied with a silk ligature, which, with another which had been needed for a vein, was cut off short. The peritoneum was accidentally opened, and a portion of the liver exposed. A large drainage-tube was inserted, and the wound then closed. The tube was withdrawn on the sixth day, and the patient made a good recovery: she is now in perfect health, and her urine normal. No carbolic acid or other of the so-called disinfectants were used in the operation.

ETHYL BROMIDE INTERNALLY FOR SPASMODIC COUGH.—Dr. William Squire recommends a solution of bromic ether in water (1 to 200) for administration in whooping-cough, as well as for angina and spasmodic pain. It may be given in the same manner as the aqua chloroformi of the British Pharmacopœia.

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MISCELLANY.

DEATH OF JOHN FORSYTH MEIGS, M.D.—On December 16, at his residence in Philadelphia, Dr. John Forsyth Meigs died, after a short illness, of pleuro-pneumonia, the result of a recent cold. He was in the sixty-fifth year of his age. He was graduated from the University of Pennsylvania in the class of 1838, and subsequently filled the position of resident, and afterwards of attending, physician to the Pennsylvania Hospital. He served in the latter capacity from 1859 to 1882, when he resigned, in order to be succeeded by his son, Dr. Arthur V. Meigs. He early entered upon medical teaching, and was connected with the once celebrated Chant Street Summer School of Medicine, known as the Association for Medical Instruction. Subsequently he lectured regularly at the Pennsylvania Hospital during his term of service. An occasional contributor to the medical journals, or to the transactions of the College of Physicians, of which he was an honored member, his principal work is that in conjunction with Dr. Pepper on Diseases of Children, which has passed through seven editions, and is universally looked upon as a standard work of reference upon this subject. Dr. Meigs was modest, large-hearted, always courteous and considerate in his intercourse with his colleagues, and especially with the younger members of the profession, and kind and sympathizing with his patients. He enjoyed to an unusual degree the confidence of the community, and had a very large consulting practice, representing, as he did, a type of family physician which in former years did very much to establish the honor and dignity of the medical profession, one totally at variance with the sordid and business-like spirit manifested by so many at the present day: hence he acquired great influence over his families, and commanded universal respect, as he won universal regard.

The fact that Dr. Meigs studied at the University of Pennsylvania, although his father, Prof. Chas. D. Meigs, was an honored Professor in Jefferson College, has excited some remark; but the explanation is simply that Prof. Meigs did not become a member of the faculty at the latter school until the time of reorganization, in 1841. It is evident that it was at that time too late to affect the college course of his son, graduated three years before.

A CASE OF SUCCESSFUL NERVE-STRETCHING FOR SCIATICA.—Dr. Randolph Winslow reported the following case to the Clinical Society of Maryland, and presented the patient for examination. A. R., 52 years of age, employed in a machine-shop, was attacked by severe sciatica last January. Deriving no permanent relief from medical treatment, including electricity, hypodermic injections, and blisters, he became bedridden, emaciated, and helpless, the pains becoming worse from day to day. On August 11 an anæsthetic was given, and the nerve exposed in the middle of the thigh: it was then pulled from its bed, the nerve within its sheath, so as to elongate it considerably, the limb being lifted from the bed by the force used. The wound was cleaned, and a drainage-tube inserted; it was then brought together with silver wire, and dressed with a pad of oakum. The next day the pain had notably diminished, and in five days the wound had healed, except at the point left open for drainage. In two weeks he had so far recovered that he was able to get out of bed, and to execute all the ordinary movements of the leg which was straight. He was entirely free from pain, except an occasional dart in the perineal nerve. His foot felt numb. Three months after the operation his improvement continues. He has no pain, sleeps well, has good appetite, and considers himself well enough to go to work. He had walked five miles with scarcely any fatigue or discomfort, but thinks he tires more readily in the limb which was the seat of the disease. The operator, in considering the point selected for operation, says that there is a small space just below the glutæus maximus in the upper third of the thigh, where the nerve is only covered by integument and fascia. Lower down, but still above the popliteal space, it may also be exposed after it passes the long head of the biceps; and this he considers the place of election, as the nerve here is only covered by skin and fascia, and is easily exposed by drawing apart the biceps and semitendinosus. The operation does not involve danger from hemorrhage, as it is sufficiently above the popliteal space.—*Maryland Medical Journal.*

THE JAPANESE GOVERNMENT has imposed a tax of ten per cent. upon all manufactured drugs, to take the place of the druggists' license. In several provinces, indignation meetings have been held and petitions made requesting the repeal of the obnoxious act.

UNITED STATES PHARMACOPŒIA.

DISMISSALS.

Acetum.
" Destillatum.
Achillea.
Acidum Oxalicum.
" Phosphoricum Glaciale.
" Valerianicum.
Aconitia.
Aconiti Folia.
Alcohol (sp. gr. 0.835).
" Amylicum.
Aloe Barbadensis.
" Capensis.
Alumen.
Ammonii Chloridum.
Angustura.
Antimonii Oxysulphuretum.
Apocynum Androsæmifolium.
Aqua Acidi Carbolici.
" Carbonici.
Aralia Nudicaulis.
" Spinosa.
Argentum.
Arsenicum.
Asarum.
Asclepias Incarnata.
" Syriaca.
Avenæ Farina.
Barii Carbonas.
" Chloridum.

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Berberis.
Bismuthum.
Cadmii Sulphas.
Cadmium.
Caffea.
Canella.
Canna.
Carota.
Carthamus.
Cassia Marilandica.
Castoreum.
Cataria.
Ceratum Resinæ Compositum.
" Saponis.
" Zinci Carbonatis.
Cinchona Pallida.
Confectio Aromatica.
" Aurantii Corticis.
" Opii.
Conii Folia.
Coptis.
Cornus Circinata.
" Sericea.
Cotula.
Creta.
Cupri Subacetas.
Cuprum.
" Ammoniatum.
Curcuma.
Decoctum Chimaphilæ.
" Cinchonæ Flavæ.
" " Rubræ.
" Cornus Floridæ.
" Dulcamaræ.
" Hæmatoxyli.
" Hordei.
" Quercus Albæ.
" Senegæ.
" Uvæ Ursi.
Delphinium.
Digitalinum.
Diospyros.
Dracontium.
Elaterium.
Emplastrum Aconiti.
" Antimonii.
Erigeron.
" Canadense.
Euphorbia Corollata.
" Ipecacuanha.
Extractum Arnicæ.
" Belladonnæ.
" Cannabis Americanæ.
" Conii.
" " Alcoholicum.
" Dulcamaræ.
" Erigerontis Canadensis Fluidum.
" Hellebori.
" Hyoscyami.
" Ignatiæ.
" Jalapæ.
" Senegæ.
" Spigeliæ et Sennæ Fluidum.
Extractum Stramonii Foliorum.
" Valerianæ.
Fermentum.
Ferri Ferrocyanidum.
" Subcarbonas.
" Sulphuretum.
Frasera.
Gentiana Catesbæi.
Geum.
Gillenia.
Glyceritum Acidi Carbolici.
" " Gallici.
" " Tannici.
" Picis Liquidæ.
" Sodii Boratis.
Granati Fructus Cortex.
Helianthemum.
Helleborus.
Hepatica.
Heuchera.
Hordeum.
Hyoscyami Semen.
Infusum Angusturæ.
" Anthemidis.
" Buchu.
" Calumbæ.
" Capsici.
" Caryophylli.
" Cascarillæ.
" Catechu Compositum.
" Cinchonæ Flavæ.
" " Rubræ.
" Eupatorii.
" Gentianæ Compositum.
" Humuli.
" Juniperi.
" Krameriæ.
" Lini Compositum.
" Pareiræ.
" Picis Liquidæ.
" Quassiæ.
" Rhei.
" Rosæ Compositum.
" Salviæ.
" Sennæ.
" Serpentariæ.
" Spigeliæ.
" Tabaci.
" Taraxaci.
" Valerianæ.
" Zingiberis.
Iris Florentina.
Juniperus Virginianus.
Lini Farina.
Linimentum Aconiti.
Liquor Barii Chloridi.
" Calcii Chloridi.
" Morphiæ Sulphatis.
" Potassii Permanganatis.
Liriodendron.
Lycopus.
Maranta.
Marmor.
Mel Sodii Boratis.
Monarda.
Mucuna.
Nectandra.
Oleum Camphoræ.
" Monardæ.
" Origani.
" Succini.
" Tabaci.
Os.
Ovum.
Panax.
Papaver.
Petroselinum.
Pilulæ Quiniæ Sulphatis.
Pilulæ Scillæ Compositæ.
Pilulæ Saponis Compositæ.
Polygala Rubella.
Potassii Carbonas.
" " Impura.
Pulveres Effervescentes.
Pulvis Aloes et Canellæ.
Quercus Tinctoria.
Ranunculus.
Rubia.
Ruta.
Sabadilla.
Sabbatia.
Sago.
Sesamum.
Simaruba.
Solidago.
Spiræa.
Statice.
Succus Conii.
" Taraxaci.
Suppositoria Acidi Carbolici.
" " Tannici.
" Aloes.
Suppositoria Assafœtidæ.
" Belladonnæ.
" Morphiæ.
" Opii.
" Plumbi.
" Plumbi et Opii.
Syrupus Fuscus.
Tapioca.
Testa.
" Præparata.
Tinctura Castorei.
" Hellebori.
" Iodinii Composita.
" Jalapæ.
" Lupulinæ.
" Opii Acetata.
" Rhei et Sennæ.
Tormentilla.
Triosteum.
Trochisci Santonini.
Unguentum Antimonii.
" Cantharidis.
" Creasoti.
" Hydrargyri Iodidi Rubri.
" Iodinii Compositum.
" Sulphuris Iodidi.
" Tabaci.
Uva Passa.
Veratrum Album.
Vinum Portense.
" Tabaci.
" Xericum.
Viola.
Xanthorrhiza.
Zinci Oxidum Venale.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY FROM DECEMBER 9 TO DECEMBER 23, 1882.

ALDEN, CHARLES H., MAJOR AND SURGEON.—Now in St. Paul, Minn., to proceed to Fort Yates, D.T., and report to the commanding officer of that post for duty. Paragraph 3, S. O. 212, Department of Dakota, December 14, 1882.

BROWN, JUSTUS M., MAJOR AND SURGEON.—Granted leave of absence for fifteen days. S. O. 119, Department of the South, December 11, 1882.

BANISTER, J. M., ASSISTANT-SURGEON.—To proceed to camp on White River, Colorado, and to report to the commanding officer. Paragraph 7, S. O. 250, Department of the Missouri, December 11, 1882.

HALL, W. R., ASSISTANT-SURGEON.—Granted leave of absence for one month. Paragraph 8, S. O. 250, Department of the Missouri, December 11, 1882.

MADDOX, T. F. C., ASSISTANT-SURGEON.—To report to the commanding officer, Fort Clark, Texas, for duty. S. O. 138, Department of Texas, December 16, 1882.

PORTER, J. Y., CAPTAIN AND ASSISTANT-SURGEON.—To proceed to St. Francis Barracks, St. Augustine, Fla., and to report to the commanding officer of that post for temporary duty. Paragraph 2, S. O. 119, Department of the South, December 11, 1882.

WYETH, M. C., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Granted one month's leave of absence. Paragraph 4, S. O. 206, Department of Dakota, December 8, 1882.

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PHILADELPHIA, JANUARY 13, 1883.

ORIGINAL COMMUNICATIONS.

STUDIES FROM THE PATHOLOGICAL LABORATORY OF THE UNIVERSITY OF PENNSYLVANIA.

NO. XII.

*THE HISTOGENESIS OF CARCINOMA.**

BY CARL HEMPEL REED, M.D.,

Resident Physician at the Philadelphia Hospital.

ONE of the most disputed questions in pathology is that of the histogenesis of epithelium. It is a subject also of such great practical importance that it demands the most careful and systematic study. Embracing, as it does, the origin of the carcinomata and other neoplasms, as well as the *rationale* of perfect healing, it is at once apparent that an exceedingly wide field for research is opened.

Early in the spring of 1880, while working in the laboratory of Dr. H. F. Formad, the subject of the Histogenesis of Carcinoma was suggested as an excellent topic for research, and, acting upon the suggestion, I at once commenced its study.

It is but just that I here acknowledge my indebtedness for the extended facilities offered by the University of Pennsylvania to those undertaking original research, and also to Dr. Formad for his encouragement and valuable guidance in all matters pertaining to pathological investigation.

The first question which demands our attention is the much disputed one,—Does epithelium originate from pre-existing epithelial cells *only?* or, Can epithelium originate indirectly, through a series of metamorphic changes,—*e.g.*, from connective-tissue cells?

Certainly this is a subject on which hypothetical views are of no value whatever, and one in which proofs are absolutely demanded. In fact, the following concise statement expresses perfectly the principle upon which all such studies should be made: "Positive science rests upon facts as deduced from experiments, and through experiments and the microscope *only* can the true nature and etiology of tumors be settled."†

* Inaugural thesis presented to the medical faculty of the University of Pennsylvania, 1882.

† H. F. Formad, The Etiology of Tumors.

I.—HISTOGENESIS OF EPITHELIUM.

I divided my work into two parts, the first being devoted to the experimentation upon animals, studying upon them the development of epithelium in the healing of experimentally-produced ulcers; the second part being taken up with the microscopical study of cancers.

My reasons for this division were these: that in the formation of epithelium in the epidermis of healing surfaces a fair analogy is presented for the development of epithelium in cancers, and that if any source of the epithelial cells is proved in these experiments it also holds good for the source of epithelium in true cancers, and will unfold to us their histogenesis. I will now briefly narrate my experiments.

a. HEALING OF ULCERS.

Experiment I.—A large gray dog, from some unknown cause, presented an extensive and quite deep ulcerating surface between his shoulders. I carefully removed the entire ulcer, cutting down through the deep fascia, and prepared thin sections from different localities for microscopical examination. I more particularly studied the central portions of this granulating surface, for the sake of determining the nature of the so-called "islets of epithelium" which are said to be present in healing ulcers. On the peripheral portions of the ulcer the healing process was seen to have commenced, and there was no exception to this advancement from the margin in any portion. In the central portions, moreover, no sign of modification of the purulent granulating surface, which could give rise to the so-called "islets," could be observed. I carefully examined, under the microscope, with a magnifying power of four hundred and fifty diameters, as well as with lower powers, sections from every portion of the surface of the ulcer for any trace of epithelium, but could not distinguish anything but the almost uniform granulating surface made up of embryonic connective tissue.

Exp. II., March 19, 1881.—Black dog (my preference for a black animal will be obvious later on); removed from between his shoulders a piece of skin, including all the layers, and dissected the fascia beneath, thus laying bare the muscles; then taking some croton oil, I applied it to this raw surface, and by these means produced, in little more than twenty-four hours, a typical ulcer, three inches in diameter. In two weeks I removed from the animal the portion of tissue which included the site of the ulcer, and a marginal border of old skin. After hardening it for several days in alcohol, I prepared it for microscopical examination in the following man-

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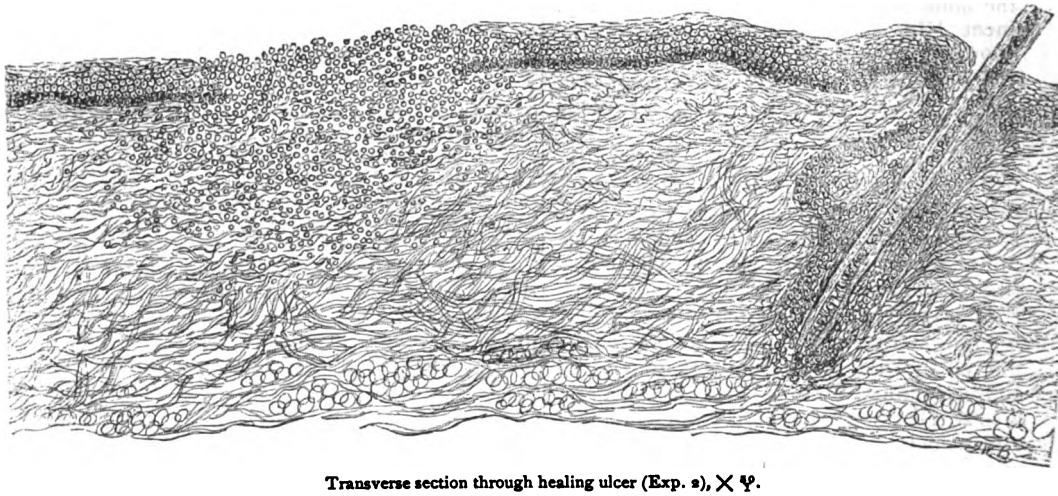
ner. Mounting the entire piece in wax, after it had hardened I cut through from top to bottom, and in this way procured sections which preserved both the surface and deeper portions of the ulcer and the marginal portions. Thus, in a prepared slide, the following order would be observed: old skin, new growth, granulating surface, new growth, and back again to the old skin. These sections were then stained by carmine and mounted in dammar varnish. Fig. 1 represents an accurate camera-lucida drawing of a perpendicular section through this healing ulcer. On microscopical examination, the section showed (Fig. 1, right side of drawing) the elements of old skin, the horny layer of epithelium, the *rete mucosum*, the pigment in great abundance surrounding the nuclei, a sebaceous gland and

FIG. 1.



Transverse section through healing ulcer (Exp. 2), × 4.

a hair; in short, the usual appearance of *derm* and *epiderm*. Towards the left (about middle of drawing) the appearance is different. Here the margin of the healing ulcer is seen; the elements of the cutis are substituted by hard dense scar-tissue, with no sebaceous glands, no hair-bulbs, and the pigment, although it was present, yet was gradually diminishing in quantity as it neared the central portion. Where the pigment met the granulating surface it could be seen proliferating and covering the ulcer for quite an appreciable distance. The horny layer of epithelium gradually disappeared as it neared the ulcerated surface, and young epithelium alone was visible up to the margin of the granulations. The pus-cells and young epithelial are in close contact, the epithelium seemingly pushing forward and away the nearest pus-cells, and advancing more and more towards the centre of the granulating surface.

Exp. III., March 22, 1881.—In a small black dog I produced a deep ulcer in the same manner as described in Experiment II. This time I allowed the healing to extend several days longer, and then removed the portion as in the preceding experiment. On preparing a slide for microscopical examination, the same relation of old skin and new growth was observed. The microscope revealed the peripheral growth of epithelium as in Experiment II., but in this case, although the epithelium in the central portion was wanting, the *pigment* had extended completely over the remaining part, thus entirely extending over the healing surface. This extension of pigment from without inward I would particularly emphasize, as it bears a very important part in the solution of the question under consideration.

Exp. IV., March 24, 1881.—Preparing an ulcerated surface as before on a large "coach-dog," I allowed it to heal over completely, and, after removing the portion, prepared some sections for microscopical examination. In these sections the complete epithelial covering of the ulcer was shown, the central portion, however, being very scantily covered with horny layers of epithelium. As in the other experiments, the absence of sebaceous glands and hair-follicles in the newly-healed portion was noted, the pigment in this instance extending entirely across and being not noticeably lessened in quantity in the centre.

Exp. V., April 9, 1881.—Taking another dog, I removed quite a large portion of skin and fascia,—over six inches in diameter,—and allowed the surface to heal entirely. This was then removed, and a microscopical examination showed the epithelium covering the whole area of denuded surface, and the horny layer of epidermis extending about two inches from the periphery.

Exp. VI., April 20, 1881.—Taking the same

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animal as in Experiment II., I removed from the seat of my former experiment the new-growth portion, which had almost healed. Examining a microscopic section of this healing surface, it showed an appearance almost identical with Experiment II. A most beautiful and convincing proof of the advancement of the epithelial mass from the periphery is given in this experiment. The epithelium, looking like a solid cylinder, seemed to be really in the act of *pushing aside* the embryonic tissue on the granular surface, and advancing steadily onward.* (See Fig. 2.)

Experiment VII., September 17, 1881.—Taking a large brown dog, and removing as before a portion of skin and fascia, and applying croton oil, a deep ulcer was produced, which was allowed to heal to the same extent as in Experiment III. The appearance shown by a microscopical slide was so absolutely identical with that which was described in Experiment III. that any further detail would be superfluous.

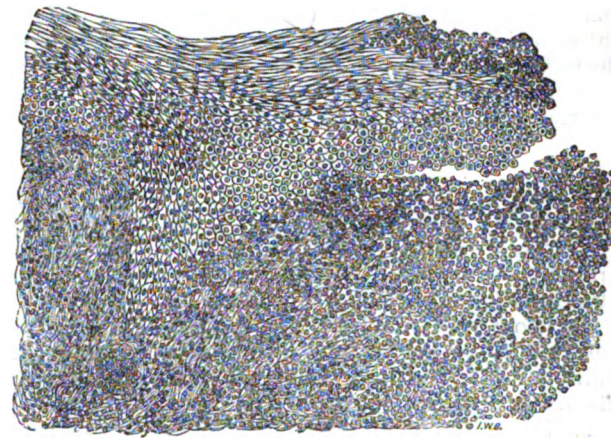
b. SKIN-GRAFTING.

In April, 1881, I three times attempted to study the growth of *skin-grafts*, but in each instance met with difficulty. The animals with which I experimented would in some way or other scratch or rub off the grafts, and no dressing that I could devise was capable of keeping them *in situ*. Although I am confident that the last two experiments were successful as far as the growth of the grafts was concerned, yet, as I could not definitely locate them, any description of the manner of growth of skin-grafts would necessarily be inaccurate. For facts I must therefore rely upon the literature of skin-grafting.

The first *attempt* at skin-grafting was in reality made by Prof. F. H. Hamilton, of New York, in 1847.† It was not until 1854, however, that he succeeded in *performing* the operation.‡ He stated his views as follows: "If the graft be smaller than the chasm which it is intended to fill, the graft will grow, or project from itself new skin to supply the deficiency." In another statement he implies his knowledge of the *border-growth* of new skin in an ulcer.

The operation was next extensively experimented with by Dr. J. L. Reverdin, in the hospitals of Paris, in 1869.§ He observed little epidermic islands which formed spontaneously on granulating surfaces, and reasoned therefrom that he might produce by a graft similar islands and thus hasten a cure.‖

FIG. 2.



Section through extreme margin of healing ulcer (Exp. 6), showing the advancement of a young stratified epidermal covering from the periphery inwardly (from left to right). Below is seen the granulation-tissue (right side) being gradually superimposed by the epithelial covering. Left side (below) shows cicatrization of the covered granulation-tissue. Camera-lucida drawing × 2$\frac{9}{10}$, reduced one-half.

From the time of Reverdin's experiments up to the present date there has been a never-ceasing debate as to whether in skin-grafting it is the graft which *stimulates* the granulating surface of an ulcer to a transformation of its embryonal cells into epithelial,¶ or whether the cells of the graft actually proliferate.

Mr. Bryant** claims the latter to be the case, and cites as an evidence in favor of his view an experiment which he performed of grafting a piece of black skin upon a white man. As the ulcer disappeared, the black skin increased in size.††

Not wishing in this paper to go into too great detail on this particular branch of

* Thanks to the skill of my friend and colleague Dr. Blackburn, I was enabled to procure a perfect reproduction of this microscopical appearance. I am indebted to him also for the drawing for Fig. 1 in this study.

† Buffalo Medical and Surgical Journal, February, 1847.

‡ New York Journal of Medicine, September, 1854.

§ Bulletin de la Société de Chirurgie, 1869; Gazette des Hôpitaux, January, 1870.

‖ For an excellent résumé of the subject of skin-grafting, see Encyclopædia of Surgery, Ashhurst, vol. i.; also, Archives Gén. de Médecine, 1872, t. i. p. 277; Marc Sée, Gazette Hebdom. de Paris, Juillet 20, 1870; Philadelphia Medical Times, 1873, G. T. Maxwell.

¶ Marseille Médicale, dixième année, No. 7, 1873.

** Guy's Hospital Reports, 1872, vol. xvii. p. 237.

†† Dublin Journal of Medical Sciences, vol. lxi. p. 388.

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the subject, suffice it to state that at present the operation has received the highest commendation from the most prominent surgeons, Profs. Agnew and Ashhurst, of the University of Pennsylvania, expressing their unqualified belief in its utility and practicability. The former, in speaking of the manner of growth of the graft, claims that the graft grows by a multiplication and proliferation of its own cells, yet it also seems to stimulate proliferation of the *skin-cells* surrounding the ulcer, so that the two send out cicatrizing arms towards each other, which, coalescing, divide the surface into smaller parts. He also deduces from Mr. Bryant's case the fact that "grafts lose none of their structural peculiarities by change of place."*

c. DEDUCTIONS.

Reviewing the preceding topics, I will arbitrarily divide the authorities on skin-grafting and the healing of ulcers into two classes, as follows:

1. Those who hold that the epithelial covering in the healing of ulcers may arise indirectly as a metamorphosis from granulation or young connective tissue.

2. Those who hold that the epithelial covering arises *only* from pre-existing epithelium of the borders of the ulcer, or from remnants of epithelium not destroyed by the ulcerative process.

The strong points of the authors of the first class, that which represents the epithelial covering as arising from the *connective-tissue corpuscles*, may be stated as follows: "When an ulcerated surface heals, although there is a slight amount of peripheral epithelial growth, yet the central portion of the granulating surface shows small *islets* of epithelium arising without any direct communication with the old epidermis, and it is these islands which give rise to the larger portion of epithelium, which eventually covers the granulating surface."

This argument is deficient. That these islets have no connective-tissue origin my preparations show very distinctly. Most certainly islets of epithelium *do* appear, *not* from any spontaneous generation or metamorphosis, but merely from some remnant of the *rete Malpighii*, one of the papillæ remaining intact beneath the granulating surface and thus forming a central point of departure. Even if the papillæ are removed, some of the remnants of the sweat-glands, which extend very deeply into the cutaneous tissue, may form a starting-point for an epithelium islet. In *no* instance where the deepest layers of the skin have been destroyed can positive proof be brought to show that these islets of epithelium originate from the connective tissue or from the granulations. In each of my experiments upon the healing of ulcers I have in vain sought for these isolated islands of epithelium; and certainly if they had been present they could not have escaped my careful search.

Another statement has been made, that on *large* ulcerated surfaces the epithelium from the periphery is insufficient to cover the immense surface of granulations. Yet it is well known that epithelium is one of the most rapidly growing of tissues,—*e.g.* the immense bulk and rapidity of growth of the carcinomata. Then my experiments show very clearly the peripheral growth of the epithelium, in every instance covering the denuded surface, showing the advance of the pigment towards the centre, its proliferation into the healing portions, the horny layer of epithelium advancing and finally covering the whole surface from periphery to centre. All these facts serve to show how untenable is the ground of those who claim a direct transition of the granulation-tissue, insularly, into epithelium.

II.—PATHOGENESIS OF EPITHELIUM, WITH SPECIAL REFERENCE TO THE FORMATION OF CANCER.

a. VIEWS OF AUTHORS.

The theories in regard to the origin of epithelium in cancers are quite numerous and widely divergent. In this part I will first quote, as correctly as possible, the several authorities and their views on the subject, and then conclude with my personal observations.

First view.—Epithelial cells may arise from connective-tissue corpuscles, the connective tissue undergoing a change to embryonic tissue, and from thence to epithelial. Rokitansky,† Virchow,‡ Förster,§

* Surgery, D. Hayes Agnew, vol. i. p. 126.

† Hdb. d. Path. Anat., Vienna, 1855.
‡ Loc. cit., und Würzburger Verhandlung, Bd. i., Cell-Path., 4te Aufl. p. 565.
§ Hdb. d. Path. Anat., Allgemeinen Theil, 2te Aufl., 1863.

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Müller,* Woodward,† Classen,‡ Köster,§ Gusenbauer,|| C. Weil,¶ Stricker.**

Second view.—Many cancers originate from the endothelium of the lymphatics. Köster.††

Third view.—Cancer-cells originate from a transformation and migration of white blood-corpuscles. A. Classen,‡‡ J. J. Woodward.§§

Fourth view.—There are those who, although admitting an epithelial origin of carcinoma, yet claim for some of the glandular cancers a different origin. Thiersch,|||| although the first advocate of the epithelial origin of surface-cancers (epitheliomata), still admits for other cancers a possible origin from connective tissue. Neumann,¶¶ Klebs,*** Rindfleisch,††† Mayor,‡‡‡ Remak,§§§ Ecker,|||| Hanover,¶¶¶ Führer,****Recklinghausen, ††††Wagner,‡‡‡‡ Cohnheim,§§§§Cornil and Ranvier.||||||

Fifth view.—Cancers arise only from pre-existing epithelium, and in the embryo the certain stratum which is designed for the production of epithelial tissue is the source from which all epithelium is subsequently derived. Billroth,¶¶¶¶ Lücke,***** Rudnew,††††† Waldeyer,‡‡‡‡‡ Samuel,§§§§§ Birch-Hirschfeld,|| || || || || Perls.¶¶¶¶¶

There would be much less discrepancy in certain statements of some of the authorities of the connective-tissue and other views outside of the epithelial, if they would be more definite in their expression of what they mean by epithelium and what they mean by endothelium, and, again, whether or not they class alveolar sarcoma with the cancers. This is a source oftentimes of great confusion and error. Others, again, are far "behind the times" in their views upon the derivation and the nomenclature of tissues. As a striking example of the latter fact, I will quote the following from Prof. Stricker, who is a firm believer in the connective-tissue origin of cancer, and at the same time will show that his argumentation is altogether erroneous. Stricker says,****** "There is a form of heterology which differs from all others. This form is peculiar to malignant tumors, and has particular reference to their histogenesis, when from the structures of the middle layer of the *blastoderm* epithelial cells are formed." He then goes on to say, "The histogenesis of epithelium is *not well understood* by the pathologists who claim an epithelial origin for all epithelium." He (Stricker) asserts that epithelial cells are formed *only* from the outer and inner layers of the blastodermic membrane. (!) He also denies that the origin of epithelium—*e.g.* in the healing of ulcers—is any proof of the epithelial origin of cancer. In a brilliant manner, this eminent pathologist thus proceeds: "I have seen several instances of carcinoma occurring in the brain and other organs where epithelium *is not found.*" Most assuredly Prof. Stricker is here in error, as it is a known fact that we *do* find true epithelium in the brain, in the *pituitary body*, in the *pineal gland*, in the *cerebro-spinal canal*, etc. Stricker also claims that "he has seen glandular acini transformed from *muscular* tissue, (!) the epithelial cells showing the striated appearance of the muscular cell from which it was derived." (!) The way in which this transformation occurs he does not describe, and he bases the transformation merely upon *his* interpretation of the microscopic picture, and "trusts that these conclusions will not be disbelieved, as he examined *so carefully* the preparations."

It would be mere folly to accept such statements as truths, as they are contrary to the laws of physiology and pathology; yet he states, in a decidedly dogmatic manner, at the end of his paper, "Thus I have conclusively [?] shown that carcinoma may be derived from *any* of the three layers of the blastoderm."

It is certainly true that carcinomas may be derived from "any of the three layers of the blastoderm;" but, in reference to

* Jenaische Naturwissenschaftliche Zeitschrift, Bd. vi.
† Toner Lectures, Lect. I., 1873.
‡ Virchow's Archiv, Bd. l. s. 56.
§ Virchow's Cell.-Path.
|| Archiv für Klin. Chirurg. ¶ Med. Jahrbücher, 1873.
** Vorlesung. über Allgemein. und Exp. Path.
†† Loc. cit.
‡‡ Die Entwickelung der Carcinome und Sarcome, Würzburg, 1869. §§ Loc. cit.
|||| Der Epithelialkrebs, Leipzig, 1865.
¶¶ Habil Schrift, 1869.
*** Hdb. der Path. Anat., 1868–71.
††† Lehrbuch der Path., 2te Aufl., 1870.
‡‡‡ Thèse, Paris, 1845; Bull. de la Soc. Anat., 1844, p. 218.
§§§ Deutsche Klinik, 1854.
|||| Archiv für Physiol. Heilkunde, 1844.
¶¶¶ Müller's Archiv, 1844, und Das Epithelioma, Leipzig, 1852. **** Deutsche Klinik, 1851, p. 365.
†††† Mon. f. Gebrtsk., 1861, vol. xvii. p. 322.
‡‡‡‡ Loc. cit. §§§§ Allgemeine Path., 1877.
|||| Pathological Histology.
¶¶¶¶ Allg. Chirurg. und Virchow's Archiv, 1867 und 1872.
***** Geschwülste in Pitha, Billroth's Hdb. der Chirurgie.
††††† Cf. Jahresbericht von Virchow und Hirsch, Ref. über Path. Anat., 1870.
‡‡‡‡‡ Klinischer Vorträge, herausgegeben von R. Volkmann, No. 33. §§§§ Allgemeine Path., 1878.
|||||| Pathologische Anat., Archiv d. Heilk.
¶¶¶¶¶ Allgemein. Path., 1877.

****** Loc. cit.

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the middle layer, it is *not* the connective or muscular tissue which gives rise to carcinoma, but it is the *epithelium* which also normally is found in this layer. Stricker seems to have overlooked the fact that the epithelium of the *kidneys, supra-renal bodies, testicles, uterus, ovaries, Fallopian tubes*, etc., is formed from the *middle* layer of the blastoderm. This was proved several years ago by Kölliker, Balfour,* Haeckel, and others.

But such oversights may happen to any one. It is particularly the case with specialists thus to figure out certain theories, without keeping pace with the progress of those elementary sciences which should form the basis of the branch,—in this case embryology.

b. PERSONAL OBSERVATIONS.

My own microscopical studies of sections of true carcinoma of the most varied kind, and in different stages of development, have taught me that the epithelial cells of these new formations are derived exclusively *from* epithelium.

At first I intended and thought it necessary to give minute descriptions of each separate cancer,—*i.e.*, of the cancers in different localities,—as nearly all of them present a more or less modified appearance, and every one who has studied cancer-sections is struck with the somewhat remarkable difference in the microscopical picture which cancers from different localities present. But soon I learned that this difference was only an apparent one, and that the general construction was absolutely the same in all carcinomata, whether it be a squamous surface cancer or one built up of cylindrical epithelial cells; or, in the glandular cancers, of either the hard or the soft variety. The peculiar shape and size of the cancer-cylinders are altogether dependent upon the size and shape of the lymph-spaces into which they penetrate, and upon the density of the tissue in which they are situated; and, finally, the variety of epithelium and the rate of growth condition certain modifications. Other apparent differences are incidental and dependent upon collateral influences, such as secondary inflammatory changes and all the different metamorphoses which entail certain insignificant modifications of that anatomical type.

I have convinced myself of the truth of the above-stated facts, so persistently denied by some high authorities,—viz., that all cancers grow and develop according to the same principle and laws, and that all represent a perfect unity in the anatomical type of their structure.†

My investigations, therefore, have induced me to put myself on the side of those who believe in the exclusive origin of cancer from epithelial cells, for in vain have I looked for the possible participation of elements other than epithelial in the formation of true cancer, as I will detail later.

I will now describe my microscopical preparations, having selected for the purpose the scirrhous carcinoma of the mammary gland, a representation of which is given in Fig. 3, showing beautifully its immediate histogenesis from epithelium. The specimen was taken from a moderate-sized mammary cancer of about one year's duration, from a woman aged 40. The tumor was removed by Prof. Agnew, in the University Hospital clinic, about two years ago, and had been thoroughly studied, being used by Dr. Formad in his demonstrations ever since. A thin section stained by carmine and mounted in dammar shows the following (see Fig. 3). A few normal glandular acini are seen in transverse section, the arrangement and relation of the cells in one of them appearing to be perfectly normal. The cells of the other acini are somewhat enlarged in size, and completely fill the lumen. Near the normal acinus are seen a few others, which do not present this appearance, the cells not resting upon the basement membrane, and, although completely filling the lumen, are somewhat retracted from the basement membrane. This latter also seems to be entirely absent on one side of the acinus, as if it were ruptured. However this may be, the cells are distinctly seen to have travelled out of the acinus and to have proliferated and penetrated into the surrounding connective tissue: so that the mass of epithelium filling one of the lymph-spaces, thus forming a cancerous cylinder, is directly continuous with the epithelial mass contained within the glandular acinus. Alongside of the young cancerous cylinder just described are seen a number of others, made up of the usual epithelial masses, but in which no connection with

* Quarterly Journal of Microscopical Sciences, vol. xviii., 1878.

† It is beyond the scope of my present work to describe here the macroscopic appearances of the individual cancers.

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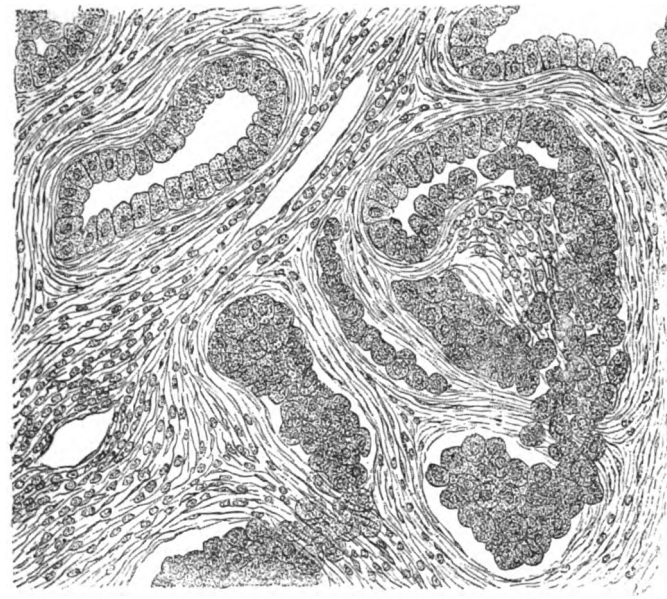
normal glandular acini can be traced. Appearances like those described are seen in many portions of the growth, so that the direct origin of these cancerous cylinders from the epithelial cells of the normal glandular acini can be justly inferred. A break in the integrity of the basement membrane in certain portions of the glandular acini is also distinctly demonstrable. It is from such ruptured openings of the basement membrane that the proliferating epithelial masses escape, as in no instance where the basement membrane is found intact can any cancerous cylinders be observed to be starting from the acini. The spaces into which the cancerous cylinders penetrate correspond exactly in shape and direction to the lymph-channels of the normal mammary gland.

FIG. 3.



Section of a mammary cancer (case of Prof. Agnew, University Hospital Clinic), showing direct origin of the cancer-cylinders (see lower and right portion of drawing) from the epithelium of the normal glandular acini (upper portion) through destruction of basement membrane. Lymphoid infiltrations around blood-vessels. (See text.) $\times \frac{49}{1}$.

In sections of cancer in which the epithelial cylinders are cut in the most varied directions (in respect to the course of the lymph-channels which they fill), the *connective tissue of the alveoli* represents the walls of these lymph-spaces.

Through Dr. Formad's laboratory demonstrations I had been long ago acquainted with the fact that the alveolar appearance in sections of cancer, as represented in books, and which is regarded as a criterion for this new growth, is only an artificial picture, and does not represent the true anatomical construction of a cancer. In reality the appearance of the alveoli, which may vary from round to a long elliptical shape, is due to the transverse section of the lymph-channels, which in cancer are filled with the epithelial cell-masses. The epithelial cells which lie in these alveoli do not stand in any relation at all to the walls of the spaces. As has been stated before, the cells are always seen somewhat retracted and heaped together in the middle of the alveoli, and the endothelial cells which cover the connective-tissue trabeculæ of the alveoli are seen everywhere intact, as can be easily seen in a preparation stained with nitrate of silver, and do not show any sign of proliferation.

Around the blood-vessels, which here and there are seen running through the trabeculæ of the alveoli, there is seen in several places a proliferation, or, more properly, an infiltration, of lymphoid cells. (See Fig. 3.) I have never seen in my preparations these young cells in any other location than within the substance of the trabeculæ which forms the alveolus,—*i.e.*, in the adventitia of the blood-vessels,—and in no place could I discover them inside the alveoli or in connection with the epithelial cells. This is also shown in the reproduced drawing of Waldeyer (Fig. 4), who also properly seems to deny any relation of the lymphoid infiltrate with the cancer-cylinders. This young lymphoid infiltration around the adventitia of the blood-vessels appears to me to be wandered-out white blood-corpuscles. In some places they are seen to have undergone decided modification in size, becoming spindle-shaped, stellate, and modified in other ways in their transition to the formation of connective tissue. I was unable to discover, however,

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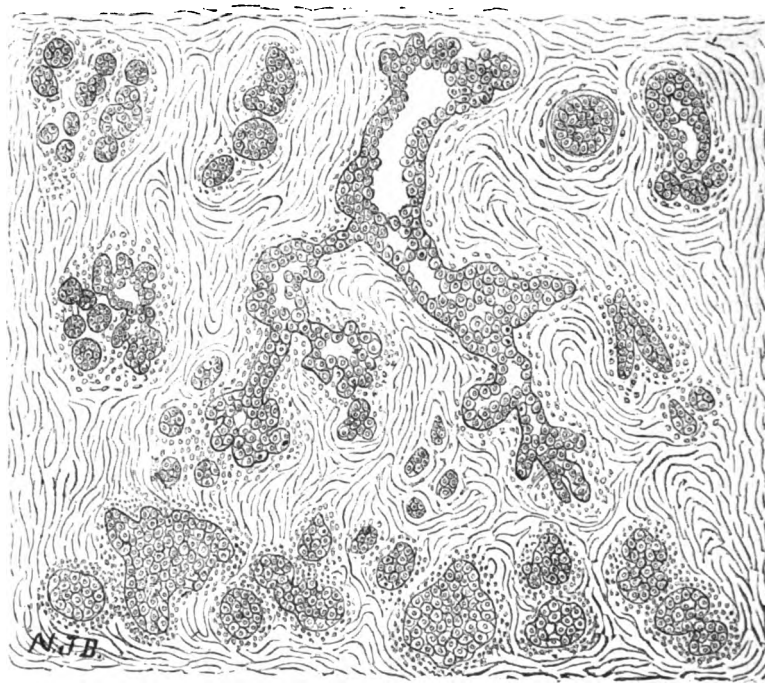
any trace of transformation into epithelial cells, or any "wandering" of these lymphoid cells into the lymph-spaces, or into the alveoli containing the epithelial cylinders.

From the preceding studies and accompanying drawings, it is seen that the epithelium of the cancerous bodies must be exclusively derived from epithelium; and

FIG. 4.



Mammary cancer, after Waldeyer (*loc. cit.*), showing the independence of "carcinomatous bodies" from the lymphoid infiltrate around them.

I have studied hundreds of sections of cancers from different locations, and this description of the above specimen applies, with only slight modification, to all varieties of this new growth.

From the above description the general minute anatomy of a cancer may be summed up as follows. A system of channels, produced by the distended lymph-spaces of the connective tissue of a part, is filled with epithelial cells, which had taken their departure from some epithelial structure, and which grow by a proliferation and multiplication of their own. The epithelial elements thus more and more distend these spaces, and extend by penetration into additional ramifications of the lymph-spaces. These channels intercommunicate in precisely the same manner that they do before they are filled with epithelium, and it is the transverse and oblique sections of these channels which give rise to the peculiar alveolar appearance of sections of cancer under the microscope.

I firmly believe that the views as propagated by the authors of the connective-tissue origin of cancer are thoroughly incorrect.

The same may be said of the modifications of the connective-tissue theory,—those relating to the origin of cancer from endothelium or from migrated white blood-corpuscles.

The reasons for these assertions may be summed up as follows:

1. It has never been proved that any true carcinoma originated heterotopically,—*i.e.*, took its origin from any other tissue than epithelium.

Careful study has shown the direct transformation of normal glandular acini into cancer-cylinders,—*i.e.*, into free epithelial cells not restricted by any normal boundaries. This cannot be disproved. The following objection is made by opponents of this view: "If carcinoma develops only from epithelial tissue, how is it that we have *primary growths* affecting the lym-

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phatic glands and other organs destitute of epithelium?"

In answering this perfectly fair question, a very important clinical fact should not be overlooked: we never have cancer of lymphatic glands unless carcinomatous change exists in some epithelial gland elsewhere in the body, however insignificant it may be, or has existed previously. Tumors, including cancers, occasionally heal spontaneously, the healing or cicatrization "squeezing the cellular elements to death," leaving merely a dense scar-tissue. Now, recalling to mind the great part which *metastasis* plays in disseminating these epithelial elements, why cannot we with perfect propriety oppose to this question another,—"Is it not rather probable that the cancer-elements have been *deposited* in the lymphatic glands or other organs by metastasis, thus *simulating* a primary growth, and yet the original cancer (which has been, for instance, situated in the mammary gland) have undergone this cicatricial change, absolutely showing no sign of malignant growth?"

Again, the objection implies the oversight of another important clinical truth: "A primary cancerous growth is *never* encapsuled." Yet we find in all the so-called "primary growths of lymphatic glands" a distinct capsule surrounding the tumor. It is therefore obvious that the objections to epithelial origin of glandular cancers are untenable; and until a primary true cancer in organs other than epithelial is distinctly demonstrated, the connective-tissue origin of these growths must be considered fallacious.

The same may be said of the colloid cancer of the peritoneum. Here, too, there appears to be an inconsistency with the proposition of the exclusive epithelial origin of cancers, as the peritoneum is lined only by endothelial cells, which are merely modified connective-tissue cells. The explanation given in connection with the preceding argument holds good also in this instance. Besides, the records of the cases of colloid cancer of the peritoneum are highly imperfect.

2. In favor of the connective-tissue origin of cancer is also brought forward the observation of young broods of lymphoid cells infiltrating the cancerous structure, or at least it is asserted that a part of the cancerous cylinders is formed from the cells composing this lymphoid infiltration. The observers who advocate this view say that it is impossible to explain the appearance of these broods of young cells unless their participation in the cancer-formation is admitted.

I fully agree that they do take a part in the formation of these neoplasms, but only in the formation of the connective-tissue reticulum, and *not* of the cancer-cylinders. My preparations distinctly show that these young broods of lymph-cells are seen only around the blood-vessels in the trabeculæ of the alveoli, and in the surroundings of the cancer; but they never enter the larger lymph-spaces,—*i.e.*, those which form the lumen of the cancer-alveoli. Besides, I have observed that they only undergo modifications in shape, which lead to the formation of connective tissue, and never show any tendency to the formation of epithelial cells.

Again, this lymphoid infiltration does *not* form the first step in the morbid process, as Woodward claims,* but it is a secondary result due to the inflammatory changes in the connective tissue excited by the invasion of the epithelial cells. A careful study of these young broods of lymphoid cells shows that they are designed to add to the bulk of the connective tissue, which is essential as the frame-work of the cancer. On the other hand, they also constitute the material for a development of those connective-tissue masses in the central and older portions of the tumor, which accomplishes the cicatrization of the cancer, thus occasioning *the rare healing* of cancers.

3. The view of Köster that cancers originate from the endothelium of the lymphatics at first sight seems quite plausible, especially as the cancer-cylinders are always found resting and extending in the lymph-spaces. Yet this view is easily disproved, if cancer specimens are practically and carefully examined. Many observers coincide in the statement that the endothelial cells of the cancer-stroma are always found to be intact, and, in fact, *no* one has seen them proliferating. The endothelial lining of the alveoli is seen to be perfect in several of my specimens stained with nitrate of silver.

There is a class of new formations, however, which closely simulate true cancer,—viz., the large round-celled sarcoma and the alveolar sarcoma. These are eminently

* Loc. cit.

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connective-tissue growths. They develop mainly from the endothelium of the lymph-spaces, and may be properly designated *endo*-thelial cancers, or endotheliomata, as Dr. Formad calls them. Now, it is possible that Köster classes, as some other pathologists do, these tumors with the cancers, and from their histogenesis draws conclusions for the origin of true carcinoma. This would be certainly erroneous, as, beyond a mere histological resemblance to the unpractised eye, these neoplasms have nothing in common with cancers.

In conclusion, I will summarize the essential points in favor of the exclusive epithelial origin of cancers:

1. Primary true cancers are found only in locations where there is pre-existing epithelium.

2. No cancer has been proved beyond doubt to have originated heterotopically.

3. The cicatrization of cancers explains the young connective-tissue infiltration.

4. Young connective-tissue cells or white blood-corpuscles never being seen inside the alveoli.

5. The independence of the epithelial cancer-cylinders from the connective tissue.

6. The intactness of endothelial ensheathments of connective-tissue trabeculæ forming the alveoli.

7. The mode of development and concentric growth of *secondary* cancers.

8. The proliferating power of epithelium *normally* is greater than that of any other tissue.

9. The results of my experiments showing that the epithelial covering in the healing of ulcers is exclusively derived from the epithelium of the border, a most conclusive proof of this being *the gradual advancement of the pigment from the borders of the healing ulcer;* this fact, by analogy, forming a strong testimony in favor of the epithelial origin of cancer.

10. The transformation of connective-tissue cells into epithelial cells, in extra-uterine life, does not occur, physiologically or pathologically.

REFILLING OF PRESCRIPTIONS.—In Wisconsin any druggist, apothecary, or vender of medicine is liable to a fine of ten dollars and costs for every time he is convicted of refilling a prescription marked "No Duplicate."

THE INSUFFICIENCY OF THE LAWS GOVERNING COMMITMENTS TO ASYLUMS FOR THE INSANE: WITH REPORTS OF CASES.

BY BOARDMAN REED, M.D.,

President of the Atlantic County Medical Society; Physician to the Seaside House for Invalid Women, Atlantic City, N.J.

THE instances lately brought to light of sane persons having been committed to asylums for the insane, and in some cases imprisoned there for years without being able to communicate with their friends outside, have awakened the attention both of the medical profession and of the general public. Making all due allowances for the sensational coloring so often given to such topics in the daily papers, there has been gradually accumulating a large mass of evidence corroborative of the opinion that the laws governing the commitment of persons alleged to be insane are in many of the States seriously deficient. The certificate of any two physicians whom a magistrate will consider "respectable" (or of one physician in New Jersey) is accepted as sufficient evidence upon which to deprive a citizen of liberty. They may be mere medical fledglings just out of college and having no practical acquaintance whatever with insanity. In some of the States, including Pennsylvania, one of those certifying may be a dentist and the other, say a chiropodist, if only at some time they have received the degree of doctor of medicine. Nay, more: unless the committing magistrate chance to be both intelligent and scrupulous, they may be the most unprincipled of quacks, whom a few dollars will bribe to perpetrate any enormity.

The extraordinary power thus vested in physicians has been thrust upon them without the desire or consent of the profession, and entails a responsibility often most unwelcome and embarrassing. Indeed, there are two classes of the community who, above all others, should insist upon such modifications of the laws as would require a thorough investigation before some respectable tribunal of every formal charge of insanity, to the end that no sane person could ever be committed to an asylum for the insane. These classes are (1) all conscientious and reputable physicians, who would scorn to give a certificate of insanity without being fully convinced of its

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truth; and (2) all honorable and high-minded asylum superintendents, who, regardless of pecuniary considerations, would not knowingly retain in confinement a sane person.

The laws upon this subject, as well as the ideas prevalent among the people, are evidently based upon the theory that any doctor should be able, after one or two short interviews with a suspected person, to pronounce infallibly upon the question of his or her sanity. Every medical man knows the fallacy of this notion, and that there are no positive rational or physical signs by which even an expert can always certainly decide in the milder forms of mental disorder, without a prolonged study of each case under varying circumstances.

On this head Griesinger* uses the following language, which is in itself a sufficient commentary on the present method of making commitments to asylums in this country:

"When the mental faculties in a man are in a state of morbid disturbance, this may in some cases be easily and by any layman distinguished; in many other cases the decision on this point is very difficult, and requires prolonged observation and intelligent acquaintance with the science of mental disease. I have had submitted to me opinions of special medical psychologists who after six months' observation of a patient in their asylum could not come to a decision whether they should declare him insane or not; and older and recent cases have been published (Reiner Stockhausen), on which the opinions based upon long observation, instituted *ad hoc*, of eminent psychologists have been quite contradictory. . . . We see, likewise, how very inadmissible in many cases is the demand frequently made on the medical jurist (by the jury) that he, after one or two short examinations of the prisoner, should give his opinion, when sometimes the time allowed is insufficient to enable him to acquire a full knowledge of the subject of investigation."

This opinion of the distinguished German alienist is entitled to especial weight, as showing the absurdity of expecting even the experienced practising physician to decide off-hand every question of alleged insanity submitted to him.

The laws of New Jersey and Pennsylvania regarding commitments to lunatic asylums may be thus summarized. In both States there have been passed at different times various statutes upon this subject providing for more or less thorough investigations by courts or commissions in the cases of alleged lunatics charged with crime, and in the cases of the indigent insane.

In Pennsylvania a statute approved April 20, 1869, contains the following, which is the law under which most commitments in that State are now made:

"Insane persons may be placed in a hospital for the insane by their legal guardians, or by their relatives or friends in case they have no guardians, but never without the certificate of two or more respectable physicians, after a personal examination made within one week of the date thereof; and this certificate to be duly acknowledged and sworn to or affirmed before some magistrate or judicial officer, who shall certify to the genuineness of the signatures and to the respectability of the signers."

Another section of the same act imposes a fine of one hundred dollars upon any officer or employé of an asylum who delays or interferes with letters from an inmate to his or her counsel.

Still another section provides for a commission of three persons, including one physician and one lawyer, to investigate any complaint in writing to the effect that some person is wrongly confined as a lunatic. This is an important provision, which may be invoked to prevent the indefinite continuance in asylums of persons improperly confined there.

The New Jersey law is even less satisfactory. The act establishing the State Lunatic Asylum at Trenton, approved February 23, 1847, contains numerous sections relating to the admission of insane paupers, criminals, etc., which are sufficiently stringent for the most part. It provides, also, that no person shall be admitted as a patient except upon an order of some court, or upon the request in writing of any relative or friend, supported by the certificate under oath of two respectable physicians, dated within one month, to the fact of his being insane.

Like the Pennsylvania law, this does not require that either of the physicians shall be engaged in the practice of medicine at the time, nor establish any test of their "respectability" beyond the statement of the magistrate before whom the oath is taken. It does not require (un-

* Mental Pathology and Therapeutics. Wm. Wood & Co., 1882.

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like the Pennsylvania law) that either of the physicians shall have previously made a personal examination of the alleged lunatic, or shall even have seen him.

Yet this section regarding admission to the New Jersey State Lunatic Asylum seems to have been considered unnecessarily strict, for three years later a supplement to the act was passed, providing that "hereafter the certificate of *one* respectable physician shall be sufficient to authorize the admission of private or pay patients." Nothing is said here of an oath, and the implication is that it is no longer necessary.

Thus, in New Jersey it is now very easy to get a person into an asylum; but the writer is unable to learn that any statute has ever been enacted providing for getting one out again when wrongly incarcerated there, though of course there are remedies at the common law for such a case. These remedies, however, are inoperative unless the incarcerated person can command money or has the co-operation of zealous friends; and it does not appear that there is any law to protect him in his right to unrestricted communication by letter with his counsel or friends.

A copy of the New York statutes is not at hand, but they are believed to make the admission into asylums quite as easy as do the laws of Pennsylvania. In the majority of the Eastern and Middle States, at least, no legal investigation is provided as a preliminary to the admission of "pay-patients" into asylums for the insane.

The loose practice of permitting a magistrate to consign any person to that form of prison euphemistically termed an asylum, without a trial, upon the wholly unsupported statement of one or two physicians, is evidently a relic of the times when life and liberty were held much cheaper than they now are.

It may have grown out of the legal principle which debars one who is *non compos mentis* from many of the rights and privileges carefully guaranteed to other persons, and decrees that he cannot commit a crime, make a will, or execute a contract of any kind. But it was a strange omission which provided no adequate means of defence at the outset against the danger of being wrongly placed in this class.

Persons charged with any offence against the laws, from the slightest misdemeanor to the gravest crime, are afforded every opportunity to confront their accusers, and establish, if possible, their innocence before sentence can be passed upon them. But the man accused of insanity is threatened with a confinement only slightly more tolerable than that which awaits the majority of convicted criminals, and should have his reputation and liberty quite as strongly hedged about. If it is charged on the oath of impartial witnesses that he is actually violent, or if competent physicians certify that he is liable to do bodily harm to himself or others, he should be temporarily restrained pending the legal investigation of his case,—*i.e.*, until he could have a trial before a judge, at least whenever demanded by him (if not a jury as well), with the right to be represented by counsel and to have witnesses called to testify in his defence as to questions of fact. In clear cases of insanity the commitment to an asylum would be as certain under such a procedure as under that now established. In doubtful cases the accused, as in criminal proceedings, should have the benefit of the doubt. Persons confined as lunatics have theoretically the right to a trial under the *habeas corpus* act, but practically this affords no protection when a man's family have decided against him and deprived him at once of both liberty and property by the summary process now permissible. Without friends and money, or the right to communicate freely with the outside world, the person wrongly confined may be as helpless to set the machinery of the law in motion as the most confirmed lunatic. The full legal investigation should be necessary in every case, and *before* the final commitment as an insane person.

Speaking of this subject, Mr. George L. Harrison, long president of the State Board of Charities in Pennsylvania, says, in the course of a singularly able and comprehensive article on the "Care of the Insane," in his work entitled "Chapters on Social Science:"

"We do not believe that in our State there is at this time much real danger in this behalf to the freedom of any sane person, for we happen to be favored with enlightened experts in each of the important institutions, private and public, of the State, who would undoubtedly take means to redress a wrong perpetrated either by ignorance or design. Still, it is necessary to provide for contingencies; and if the medical test is even uncertain, the importance of amending it will be

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admitted without reserve, for the authority is final when the requirements of the law are even formally complied with, and the 'adjudged' lunatic must be received into the lunatic wards."

It may be granted that in Pennsylvania there have been fewer abuses of this kind than in some of her neighboring States, and doubtless for the reason stated by Mr. Harrison,—to wit, the high character of the gentlemen generally in charge of the institutions. But the protection of sane persons against the possibility of being adjudged insane and incarcerated in a form of prison should be secured by some more certain dependence than the probability that the superintendent of the establishment to which any such victim of lax laws may be committed will ultimately ascertain that a mistake has been made, and have it corrected.

No doubt, at most reputable institutions for the care of the insane, the liberation of a person wrongly committed would sooner or later be effected by the superintendent or physicians in charge; but, supposing it were certain that the asylum authorities would always ascertain that such a person was not really insane, it might well require weeks in some doubtful cases for them to decide positively as to this point, and meanwhile an injustice would continue, which might work irreparable harm to the reputation and business or property of the individual thus confined.

Another defect in the law as it now stands in most if not all of the States is that it permits the incarceration of a class of persons who, though technically of unsound mind, are harmless and inoffensive.

I grant that some monomaniacs, and some others, who, while appearing at most times entirely rational, have homicidal, suicidal, or other destructive impulses, may require to be restrained for the safety of society or themselves. But such dangerous forms of mental disease can be distinguished by competent alienists from the milder types, so that there is no necessity for condemning all these unfortunates alike to the experiences of asylum life,—experiences which the most enthusiastic friend of these institutions will scarcely deny are usually the reverse of cheerful, and are likely to prove anything but curative to a sensitive and delicate mental organization. Constant association with minds worse disordered than their own we should expect, *a priori*, to intensify and confirm the lighter cases, and very often this is just what actually results.

The following case, which came under my personal observation, shows how easily under present laws a sane man may be consigned to an asylum for the insane:

Case I.—An intelligent and scholarly gentleman was sojourning in Atlantic City during the winter months on account of a tendency to pulmonary disease. He was part of the time under my professional care, and I had frequent opportunities of conversing with him. Nothing in his manner or conversation ever awakened the slightest suspicion of mental aberration. Those who were the most intimately associated with him here for several months never saw anything amiss with his mind. Indeed, I regarded him as possessing an exceptionally calm and well-balanced mind. A striking evidence of this was afforded me when, early one winter morning during his stay here, my house was on the point of catching fire from burning buildings adjacent. The fire-company said it would burn anyway, and would do nothing for it. The excited crowd which was gathered around did not know what to do. At this juncture this gentleman came forward and suggested that the house might yet be saved by hanging carpets along the exposed sides and keeping them wet by having relays of men carry buckets of water to the roof. He himself, with the utmost coolness, superintended the work, and as a result the house was saved. During one of his occasional visits to his home in a suburb of Philadelphia, this same gentleman was called upon by a physician of the neighborhood, and a few hours later, while walking on the street, was arrested, hustled into a carriage, and taken to the State Hospital for the Insane at Norristown. Fortunately, he fell into kindly hands there, and succeeded in getting a letter to one of his friends here. Energetic measures were resorted to in his behalf, with the effect of ultimately securing his release after an incarceration of about one month. His mental soundness was so unmistakable that even the asylum authorities, as I am informed, admitted to him that they found in him no evidence of insanity. It must require an unusual degree of mental equipoise to submit, without even a show of excitement, to such an experience; but my patient bore the ordeal in a philosophical manner, employing his time in studying the various interesting features of the institution and its management. I saw him upon his return here immediately after his release, and found him in no wise changed by his singular adventure.

Numerous similar cases, only far more aggravated, could be adduced here; but I have no personal knowledge of the facts

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concerning them, and accounts of them have already appeared in the public prints.

The remainder of my cases illustrate the needlessness and inhumanity of consigning to asylums those who, though somewhat unsound mentally, are in no sense dangerous persons. The incarceration of such individuals against their wills, while it does less violence to our sense of right than the similar treatment of the indubitably sane, is at least open to serious question. In order to justify such a procedure in cases of the class now referred to, it ought to be clearly shown that they cannot be properly cared for in any other way, or else that there is a better prospect of curing them in an asylum than out of one.

It is not claimed that these are average cases of insanity. The majority of persons who are committed to asylums for the insane are doubtless worse than any of those referred to in the following reports, and find their proper place in well-conducted institutions of the kind. But among the minority of persons so committed there are unquestionably many who would be better off outside.

Case II.—This was a feeble old lady, wife of a prominent Philadelphian. She had long suffered from certain physical infirmities, and finally her mind gave way. She drifted into a form of melancholia with very fixed delusions. She was sent to Atlantic City, and placed in a quiet cottage boarding-house under my professional care. Her family physician, Dr. Charles Hermon Thomas, saw her with me at frequent intervals. For a time the improvement was so slight as to be scarcely noticeable, and the friends were almost despairing. The care of her was a great burden to all concerned, and they were beginning to listen to the arguments of those who said the best place for her was an asylum. Finally, after several months of patient treatment, aided by all the kindly and cheerful influences that love and wealth could surround her with, reason returned, and for some time before her death she was able to enjoy with unclouded mind the society of her family and friends. Nothing can be more certain than that if consigned to any ordinary insane asylum, in her feeble condition, such a recovery of reason could not have happened.

Case III.—A young lady, highly cultivated and accomplished, became afflicted with a form of decided and chronic insanity. She resided with her family in a Western city, and some years ago was brought to Atlantic City in the hope that the invigorating effect of the sea-air might assist in restoring her reason. Considerable improvement resulted, and, thus encouraged, her parents have since kept her here a large portion of the time, winter and summer. Under the constant care of a trained nurse, she goes about daily in the streets and to public places, while here, without danger to any one. Her paroxysms of excitement are becoming further apart. She is pursuing her musical studies, and gaining slowly, but steadily, in mental tone. This was originally a most unpromising case, such as usually grow worse in asylums.

Cases IV. and V.—These may properly be considered together. One was a refined and delicate lady, married to a coarse and dissipated, though wealthy, husband. They came from New England, and were spending the summer here in a private cottage. I was called to see her one night, and found her in a paroxysm of violent excitement bordering on mania. She had a number of such attacks, and in the intervals, though mentally clear, suffered from profound depression. Subsequently she procured a separation from her husband, and entirely recovered.

The other was a somewhat similar case in the beginning. I was called by a New York gentleman to see his wife, who, he said, was at times insane. They had come for a short sojourn here during the winter season. I found the lady greatly excited and trembling as if with fear. She declared that her husband had a woman concealed about the room, and begged me, in piteous terms, to protect her. Something about her face told plainly a story of unhappiness, the cause of which one accustomed to judge of human nature could not help suspecting. I prescribed a sedative, and saw no more of her. Some weeks after their return home I was requested by letter to join a New York physician in a certificate of insanity in the case of this lady, for the reason that it would be very difficult for another medical man to see her in a similar paroxysm. I declined to give a certificate without seeing her further. Most likely she has found a home in some asylum, and, if so, I fear she is likely to remain there indefinitely. Confinement in such institutions is a sorry cure for marital infelicities and the unbalanced minds resulting therefrom, but it is, unfortunately, in many cases the only remedy applied.

Case VI.—This was a Southern lady afflicted with melancholia and certain distressing delusions. She had been under the professional care of Dr. S. Weir Mitchell in Philadelphia, and was sent to Atlantic City by him in the charge of a trained nurse. She spent some two months here, and gained greatly in flesh and strength, as well as in ability to sleep, though her mental malady was otherwise less markedly ameliorated. This is only one of numerous cases of mild insanity constantly being sent here by Dr. Mitchell which come under my observation

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and are found to do well with the constant watchfulness of skilled attendants.

My notes contain the histories of many other cases, but those already given are enough to enforce the argument in favor of more efficiently guarding the liberty of the citizen,—even of the eccentric and mentally unbalanced citizen,—and of discouraging the too frequent and ready resort to the bolts and bars of a so-called asylum when a dependent relative requires extra care and attention by reason of a temporary disturbance of the mental functions.

That it is time to cry a halt in this direction is manifest from the statistics of the census, showing that the ratio per thousand of those afflicted with insanity and idiocy doubled during the decade from 1870 to 1880. In other words, the multiplication and popularization of asylums, under the lax system of commitments, have been accompanied by a startling increase in the percentage of mental disease. It may be denied that the one stands in any causative relation to the other, and doubtless there are various causes for the deplorable figures just quoted; but it is manifest at least that the asylums are not lessening the ratio of the number of lunatics to the total population.

Nevertheless, the writer does not deny that there must be lunatic asylums, and that the majority of such institutions in the United States are intelligently and humanely managed. Some of the noblest physicians and other philanthropists to be found anywhere are engaged in the work of caring for the insane gathered into such establishments. All the insane poor and those of too limited means to provide the necessary attendance at their homes or in private boarding-houses must necessarily be consigned to such places of confinement. So with all the more violent cases, no matter what their social status. It may even be conceded that there are now many lunatic at large, who, for the safety of themselves and others, should be placed under some efficient form of restraint, either in asylums or in the care of strong and vigilant attendants.

But granting all this does not in the least weaken the force of the two propositions maintained in this paper. These may be thus recapitulated:

1. That the laws in many States of the Union are defective in that they permit a person to be adjudged insane and imprisoned for an indefinite period upon *ex-parte* evidence and without a trial, thus facilitating the designs of any evil-disposed persons who may desire to put relatives or others out of their way.

2. That the laws are defective in that they make no distinction between the various grades of insanity, thereby rendering it possible to deprive of liberty, even for life, persons who are clouded in some of their mental processes, and, therefore, technically insane, yet who are in no sense dangerous or likely to become so.

Incidentally it has been urged also that patients of this latter class, as well as, perhaps, some more serious cases, may often be treated more hopefully at home, when the means of the family will allow of providing proper attendance.

TETANUS IN TYPHOID FEVER.

BY MORRIS FUSSELL, M.D.

NOTICING in the *New York Medical Record* the recital of a case of "Fatal Tetanus complicating Typhoid Fever," by Dr. Simoneau, which he regards as unique, I am reminded of two cases of perhaps similar character in my own practice:

Miss A. F., æt. 18, in the third week of a typical typhoid fever, while convalescing, surprised me one morning with paroxysms of what seemed to be muscular subsultus; but the eventual rigidity of the abdominal muscles, with throes of the face and neck, and finally the trunk, the increased temperature and pulse-rate, the clear intelligence, fraught with apprehension, made its relentless nature only too apparent, death kindly closing the respiratory struggle by apnœa.

M. P., æt. 22, a farmer, sick of a typhoid type of fever, convalescing, was attacked with tetanic symptoms lasting several hours, but subsiding under the use of anæsthetics, with a solution of veratrum viride and morphia, and finally controlled.

Failing to see in these cases an idiopathic origin, I then suspected, and have since feared, that the true factor might be in the nozzle of my syringe causing some slight abrasion, possibly of a hemorrhoid, and reflected upon the very impressible nervous system so incident to convalescence. And thus they were traumatic.

DR. BURDON SANDERSON has been elected Professor of Physiology at Oxford, England.

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NOTES OF HOSPITAL PRACTICE.

UNIVERSITY HOSPITAL.

CLINIC OF WILLIAM GOODELL, M.D., PROFESSOR OF CLINICAL GYNÆCOLOGY IN THE UNIVERSITY OF PENNSYLVANIA, OCTOBER 18, 1882.

Reported by WILLIAM H. MORRISON, M.D.

ANTEFLEXION OF THE CERVIX UTERI, WITH STENOSIS, TREATED BY RAPID DILATATION.

GENTLEMEN,—The first case that I bring before you to-day is a woman whom I have not previously seen, and I shall make the examination under ether.

This is the history. She is 28 years old, has been married five years, and is sterile. I told you on a previous occasion that when a woman has been married for several years, has dysmenorrhœa, and is sterile, you may take it for granted that one of two things exists: either she is trying to avoid having children, or else she has an anteflexion of the womb. There are, however, exceptions to this rule. Only the other day I was consulted by an unmarried woman with dysmenorrhœa, in whom the trouble was due to retroflexion. You must remember that anteflexion is not of itself a pathological condition. It is normal in virgins. It is not pathological unless associated with stenosis,—*i.e.*, narrowing. Puberty began in this patient at the age of 15, and she has had dysmenorrhœa ever since. If she were in good health, not suffering from over-work accompanied by care and worry, that would indicate some abnormal condition. To illustrate the effect of mental strain, let me refer to a case which I saw a short time ago. A girl had been working in a store for a number of years, was on her feet a great deal, but kept perfectly well. Recently, however, the girl at the head of one of the departments becoming unable to attend to the duties, on account of sickness, she was advanced to this position, where the work was easier, and where she did not have to be on her feet as much as before. As soon as she was put in this position of responsibility she began to be sick, and had to give it up. In the present case, where there was no nervous trouble, the dysmenorrhœa must have been due to stenosis. The narrowing may, however, have been due to congestion of the canal, just as when one catches a cold there is congestion of the Schneiderian membrane and a stuffed-up feeling in the head. She has had radiating pains, especially in the left iliac region, a very slight menstrual discharge, leucorrhœa, and a feeling of nausea after coition. She got married; and from my observation I should say that marriage is poison to a woman unless she has children. Nature intended that the womb should by pregnancy have a respite from the monthly congestions of the menses. At the end of nine months the woman gives birth to a child and suckles it, and this also gives rest to the womb. If now there is a stenosis of the cervical canal, she cannot become pregnant; the congestion grows worse at each period, and finally becomes continuous and pathological. Marriage adds to this chronic condition the congestions resulting from the marital relations, as coition, etc., and things go on from bad to worse, until the woman may at last become a confirmed invalid.

I shall now make the examination. This case gives me the opportunity to show you how to introduce the speculum. I remove the sheet, that you may see; but you will always do it under the sheet. I first introduce one finger into the vulva, and then a second, and separate them. Between my fingers I pass the speculum with the blades in contact, holding the instrument as I should hold a pistol. I do not pass directly backwards, for then I should hit the sensitive vascular structure about the meatus and the clitoris, but I direct the instrument downwards and backwards with a spiral motion, bringing the handle to the left side. I then separate the blades, and the cervix comes into view. This is a virginal cervix, with a small os. I now pass the sound first with a curve in the direction opposite to that in which it should go. When it will go no farther, I make a big sweep, or, as the French say in speaking of the introduction of the catheter, a *tour de maître* (a master's turn), and depress the handle, and it enters the womb with a little jerk as it clears the bend. The os is looking directly upward, showing that there is a double bend. The womb is crescent-shaped, and is movable.

I shall treat this case by rapid dilatation, which I consider the best treatment under these circumstances. I have never had a fatal result after this operation. I in one case had quite a severe attack of peritonitis in a patient who went home on the same day that I operated. I have been obliged to keep two or three patients in bed for a

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week, but I have never had such a degree of fever as to cause me any anxiety. This cannot be said of the cutting operation, which is not unfrequently followed by death.

Catching hold of the cervix, I pass in the dilator (Ellenger's) in the same way that I did the sound. The obstruction does not appear to be due so much to the smallness of the canal as to the bend in it, for the dilator readily passes through it. You observe that the instrument has a shoulder at a little over two inches from its tip. This prevents the end from reaching the fundus of the womb, for if it did the womb might be torn when the blades were separated. I now gradually dilate the os, but, although the blades are parallel, the womb seems to recede from the instrument, allowing it to come out. Having stretched the canal to as great an extent as is possible with this instrument, I substitute my own dilator, which is much more powerful. I bring the handles together, take away the ether, and allow the instrument to remain until the woman begins to squirm. I then remove the instrument.

Formerly it was the custom, when ether had been given, to try to arouse the patient by striking the face with a wet towel, calling loudly, giving a glass of brandy, or by some other means, as soon as the operation was finished; but my rule is to allow the patient to sleep as long as she will. She is then not so drunk, the pain and soreness of the operation are gone, and she is not so likely to be nauseated.

In these cases of dilatation of the cervix, I order six one-grain suppositories of the aqueous extract of opium. I introduce one just before the operation, so that it may have dissolved by the time she recovers from the ether, and order the nurse to give one every two hours until the pain is relieved. This may require three or four. It is rarely necessary to use the six.

Are there any accidents from this operation? I think that in two of my cases the internal os must have been ruptured, for there was a sudden giving way, and I could bring the handles of the dilator together without meeting with any resistance. The first time this occurred it worried me a good deal; but no bad symptoms followed. The second case behaved in the same way. Still, I do not like such accidents, and I now perform the operation somewhat more slowly than formerly. I have met with another accident in a case which had been treated by nitrate of silver. Ten years ago, almost every woman who had any sort of uterine trouble had a stick of nitrate of silver passed into the canal: as a result, the os was in many cases almost and in some entirely obliterated. In treating a case of that kind some two years ago, the dilator slipped out, tearing quite an opening through the external os, but that did not amount to much. There was pretty free hemorrhage, which was checked by Monsel's solution. On another occasion, in a virgin with a small os, the instrument slipped out, tearing the os. These are the only accidents that I have met with. This makes my one hundred and thirtieth or thirty-first case of which I have the record, and there are other cases of which I have kept no account. This operation is looked upon with disfavor by many, and the dispute in regard to the advisability of performing this or the cutting operation led me to keep a record of my cases. Many hundreds of women have had the cervix cut, and many have died. I lost a patient by the cutting operation four or five years ago. I have cut the cervix only once since, and the result was not so satisfactory as it is after dilatation.

I now remove the dilator, and you see that the internal os has been stretched at least an inch. Of course that amount of dilatation is not going to remain; but I have overstretched the canal, and it will not return to its former size. It is sometimes necessary to perform the operation a second time; but the woman is usually so much benefited by the first that she readily submits to the second.

She will now be put to bed, and the suppositories used in the way I have described. Opium suppositories have three great advantages: 1, they cannot be vomited; 2, you bring the drug near the point of suffering; a grain of opium by the rectum in these cases will do more good than a hypodermic injection of a larger dose; 3, they cause less nausea than opium in any form by the mouth.

Let me here allude to another practical point. You know that belladonna is often given with opium, and it is a good combination under some circumstances; but it is not good where you have to push the opium. You can give, where there is

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much pain, six one-grain suppositories of opium, but if belladonna is combined with the opium the patient will be poisoned by the time the second or third has been given, and, as you know, the symptoms of belladonna-poisoning are very alarming.

PELVIC PERITONITIS AND CELLULITIS PROBABLY DUE TO GONORRHŒA.

From our next patient I obtain the following history. She is 21 years old, and has been married two months. For four years she has had profuse leucorrhœa, and for the last two years severe pain in the iliac regions, worse on the right side. A week after marriage she had to go to bed, and she has been in bed ever since. She had to lie on her back, with her knees drawn up. Coughing and drawing a long breath increased the pain; there was considerable pain in each groin, and she was much swollen. The leucorrhœa was much worse after marriage. There was a thick yellow discharge, which stained her clothing. There was a great deal of burning pain about the vulva, and severe pain on passing water. During the first week she tells me that she suffered greatly in the marital relation, but now there is very little pain.

We have had in this case a pelvic cellulitis or peritonitis. There are very few physicians who can tell whether a patient has cellulitis or peritonitis. It stands to reason that if you have one you will have the other, for the peritoneum is united to the womb by cellular tissue, and any inflammation is almost certain to extend from one to the other. There are two technical terms which I wish you to remember. These are parametritis, which is applied to pelvic cellulitis, and perimetritis, which denotes pelvic peritonitis.

I shall now make the examination, and then send the patient out. I put my finger on the cervix, and it gives her pain; behind the cervix I find a little body, which is exceedingly painful. I shall now have her removed, and tell you what I think about her condition.

My opinion is that her husband had a gleet, and, supposing himself cured, married her; at least I hope he thought himself cured, for he would have been an infamous scoundrel to have married this girl, knowing that he had anything of that kind; but, having this disease, he has infected her with gonorrhœa; the inflammation has extended to the womb, and by continuity of structure through the Fallopian tubes to the ovaries, setting on foot a peritonitis and cellulitis. The womb is almost fixed. It feels as though surrounded by tallow not entirely solidified. The broad ligament consists of two folds of peritoneum, united by areolar tissue: when we have a pelvic peritonitis or cellulitis, plasma is thrown out between these folds of peritoneum, and we have fixation of the womb. Fixation is not a good term; but, as I have not succeeded in coining a better word, I still use it. Some one has made the beautiful simile that the womb in its natural condition is like a ship riding at anchor, which moves with every change in the current and responds to every change in the direction of the wind; so the womb, steadied loosely by its ligaments, responds to every movement of the body,—to every inspiration and expiration. It is needful that it should be so; for, if the womb were fixed, the male organ would during coition cause severe pain, and might indeed perforate the vagina, as has been recorded in one or two instances. A cold winter night comes, and the water in which the ship has been freely floating freezes, and the vessel no longer moves with the current. So it is with the womb: inflammation of cellular tissue and peritoneum occurs, plasma is thrown out, and the womb is fixed. When examining her, I felt a hardness of the roof of the vagina, caused by this plasma; and posteriorly I felt a little body so smooth and so sensitive that I believe it to be an ovary, which was in this position before the inflammation occurred, and which has been fixed there by the exudation.

I may possibly be doing her husband an injustice. I know nothing more difficult than the diagnosis between an honest and a dishonest vaginitis,—*i.e.*, a vaginitis resulting from natural causes and one from impure intercourse. It may be that intercourse was indulged in to excess, and an inflammation of the vagina set up, which has extended through the womb and Fallopian tubes to the peritoneum. I think, however, that the first supposition is more probably the correct one. It is not usual to have much inflammation of the urethra in vaginitis from excessive coition, cold, or other natural cause.

Pelvic peritonitis is the bugbear of gynæcologists. It is this that causes the deaths after operations. The introduction of sponge tent, curetting the womb,

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an application of iodine to the cavity, or even the introduction of a sound, may cause a severe inflammation, running on to general peritonitis, and causing the death of the patient.

I shall rapidly run over the symptoms of this disease. You have performed some operation on the uterus. The next day the woman complains of pain. This may have been preceded by a chill, which is a bad sign. She lies in bed on her back, with the knees drawn up to relax the abdominal muscles. In the vast majority of cases you can cure the patient; but if the case goes on, the phenomena of general peritonitis appear, and the patient soon succumbs.

A word or two in regard to treatment. Give as much opium as is necessary to relieve the pain. A hypodermic injection of morphia will occasionally cut short the attack. Opium is the great remedy. I also give quinia in large doses—ten grains every four hours—until the patient is well cinchonized. A poultice made from Indian meal is placed over the abdomen, and changed when necessary. If covered with oiled silk or rubber, it will remain hot and moist for twelve or twenty-four hours. In the country, where you will not have the rubber or oiled silk, you can substitute greased brown paper. Syringing the vagina with hot water is also of great service. Under this treatment the patient will usually recover.

The prognosis in this case is very unfavorable. I do not believe that she will ever be the same woman she was before this happened. She will probably be sterile. An eminent physician of New York contends that in all such cases sterility is the invariable rule; but I think that this is too broad an assertion. The sterility is due to several causes: first, the ovary is now covered with a thick layer of lymph, and the ova may not be able to force their way through it; secondly, the fimbriated extremity of the Fallopian tube is so fastened to the ovary and adjacent tissues that it may not be able to grasp the ova, even if they do escape; and, thirdly, the lining membrane of the oviduct is perhaps occluded or so thickened as to prevent their passage.

In order to be properly treated, she ought to be in the hospital and in bed. She should have a succession of fly-blisters about the size of a silver dollar, applying one every day to a different spot. She ought also to have injections of water as hot as can be borne. A syringe, like Davidson's, is better than the fountain apparatus. The forcible propulsion of hot water has two advantages over a steady stream: in the first place, hot water projected against a part feels hotter than when it comes in a slow stream; and in the second place, it gives a fillip to the tissues, stimulating the absorbents to increased action. I shall also give ammonium chloride in ten-grain doses three times a day. This is a valuable absorbent, and is also a good tonic. If she were going to remain in the hospital, I should add to each dose of the ammonium chloride one-twenty-fourth of a grain of the bichloride of mercury. Possibly the womb may in time be restored to its natural condition.

Suppose this woman asked me what caused the trouble, I should not think of telling her what I have told you. I should have no right to say, "I think your husband has infected you." I do not know it. I have never seen her husband, and her trouble may have resulted from excessive coition. Such things do happen.

TRANSLATIONS.

PHYSIOLOGICAL AND THERAPEUTICAL EFFECTS OF QUASSINE.—Dr. Campardon, having for many years employed *quassia amara* in its different preparations, concluded that it had properties which he had not seen accorded to it by other observers. He then made a series of experiments with amorphous quassine, and afterwards with crystallized quassin (Duquesnel), and determined that they have the same effects, and that they represent the physiological and therapeutic effects and are active principles of the drug, only in different degrees, the crystallized being ten times stronger than the amorphous. Without analyzing his experiments, we give the conclusions (*Bull. Gén. de Thérapeut.*) which he arrived at from numerous observations:

1. That amorphous quassine and crystallized quassine, active principles extracted from *quassia amara* (Surinam) and from *quassia simaruba*, have upon man in health certain effects which are very evident and very constant,—viz.:

2. In moderate doses this principle

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brings into activity and augments the secretion of the salivary glands, of the liver, of the kidneys, and perhaps of the mammary glands.

3. It excites the muscular fibres of the digestive tube, of the uro-poietic apparatus, of the biliary ducts, augments the mucous secretion, and facilitates the excretion of the normal secretions.

4. In the sick, as a pure bitter tonic, this substance awakens appetite, builds up the forces, and, in consequence of its action upon the muscular fibres of vegetable life, facilitates excretion, renders defecation easier, and aids the expulsion of renal or hepatic calculi.

5. Quassine, as well as the wood of *quassia amara* and *quassia simaruba*, causes death in inferior animals, even in comparatively small doses.

6. In healthy individuals, as in the sick, it produces, in certain doses, a series of tonic effects, which recall the action of convulsive poisons.

7. Amorphous and crystallized quassine, above fifteen centigrammes (two and a half grains) for the first and fifteen milligrammes (one-fourth grain) for the second dose, determine the following symptoms, which are only increased by elevating the dose: burning in the œsophagus, annular burning in the larynx, increasing constriction of the throat, frontal headache, especially to the right side, weight and pain in the region of the stomach, nausea, vertigo, troubles of sight, extreme agitation, febrile irritability, impossibility of continued thought, restlessness, frequent micturition, but which subsequently diminishes little by little, diarrhœic discharges, and vomiting. This is followed by spasmodic contractions of the muscles of organic and animal life, and cramps, due to tonic contractures of the muscles of the leg and thigh.

8. In order to combat the toxic effects of quassine, chloral internally, and chloroform externally for the spasmodic contractures, have given the best and most prompt results.

Gangrene of the Lower Extremities in a Case of Bright's Disease.—In the Proceedings of the Société Médicale des Hôpitaux for October, 1882, M. Roques communicated the details of a case showing the existence of a certain relation between nephritis and local asphyxia. A woman, 42 years of age, was admitted with intense pulmonary congestion and albuminous urine, due to asystole. She had complained for a year of vertigo, sometimes vomiting, or diarrhœa, and of dyspnœa. Her hands were pale; she said that she often had burning pains in her fingers; finally she complained of acute pain in the big toe, which, with the little toe on the right foot, became violet-colored. The pains were sometimes atrocious. The marbling extended up the foot, involving the entire right limb, but without appreciable œdema. The same appearance of gangrene developed symmetrically in the left leg. There were no eye-lesions, except paleness of the arteries. The symptoms increased, especially the dyspnœa, until death resulted. At the autopsy the lung was found consolidated, the heart was increased in size, and the sigmoid valves filled with villous vegetations. The kidneys were small and showed the lesions of chronic interstitial nephritis. The arteries of the legs were free from disease, and the cardiac lesion was insufficient to explain the local asphyxia in the opinion of Dr. Roques, who believes that we may admit a direct relation between nephritis and gangrene of the extremities. —*Bull. Gén. de Thérapeut.*, November 15.

Convallaria Majalis.—Prof. Desplats, of Lille, having administered lily of the valley to cases of cardiac disease in the condition of asystole, to those of albuminuric dropsy, and to cases of hepatic disorder, reports that in the heart cases the results were almost always satisfactory, —in several cases remarkably so; in the others they were doubtful or nil. The action of the drug seems very definitely directed to the heart and the kidneys. He believes that among those suffering with mitral insufficiency or stenosis with dyssystolic, visceral stases and hydropsy, the extract of the lily of the valley, administered in the dose of from one gramme to one and a half grammes (fifteen to twenty-two grains), slows the cardiac contractions, makes them more regular, increases their energy, and in the space of two or three days provokes an abundant diuresis, which relieves these congestions and dropsies. The diuretic action is manifested to a much less degree in cases of Bright's disease, and not at all in other diseases. He warns, in conclusion, that the convallaria should not be continued

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for any length of time; at the end of eight or ten days the cardiac energy, in place of increasing, diminishes, and there is danger of heart-failure from the toxic effect of the drug.—*Revue de Thérapeutique*, No. 22.

According to Langlebert, the active principles of this remedy reside in (1) a glucoside, *convallamarin*, and (2) an alkaloid, *majalin*. In addition to these, the plant contains convallarin (another glucoside) and an acid named majalic acid. The aqueous extract of the flowers and stalks with the roots and leaves (in the proportion of three to one) is the most powerful preparation.

Tanret advises the use of *convallamarin*, on account of its uniform strength, in place of the extract, which varies with the season and mode of preparation. This glucoside is soluble in water and alcohol, though not in chloroform or ether.—*Bull. de Thérapeut.*, August 30.

Extirpation of a Semilunar Cartilage from the Knee-Joint, with Recovery of Use of Joint.—In a communication to the *Giorn. di R. Acad. di Med. di Torino*, 1882, F. Margary reported a case, 32 years of age, in which difficulty in walking and in flexing the knee-joint, and pain on standing, were attributed to the results of former rheumatic inflammation, by which the left internal semilunar cartilage had become so altered as to act as a foreign body. Under an anæsthetic, the operation was performed by making an incision 5 cm. in length between the patella and the internal lateral ligament, and 15 mm. above the tibial border, in order not to come in contact with the substance of the semilunar bone itself; the joint was now opened, and the cartilage, together with its capsular insertion, was removed; it was 35 mm. in length, and macroscopically displayed no essential alteration. The wound was closed by stitches, and Lister's dressing applied. No fever occurred until the sixth day, when examination showed a serious synovitis, for which a weak solution of carbolic acid was employed to wash out the joint. Otherwise there was complete asepsis: the wound was healed on the thirty-sixth day. Passive motion was then instituted, and subsequently forcible flexion under chloroform was twice practised, with massage. Finally, complete restoration of the function of the joint was obtained, so that the patient, who was a fencing-master, was enabled to resume his occupation and stand for eleven hours a day without experiencing any difficulty. No alteration in the appearance of the knee was evident.—*Centralblatt für Chirurgie*, No. 45.

The Cephalalgia of Adolescents.—The surgical affections arising from defective development of the skeleton and numerous medical disorders connected with irregular evolution of the system are familiar to the profession, but there is a form of headache, occurring about the period of puberty, which is less well known, and is deserving of attention. In youths of both sexes violent headaches occur, which do not yield to ordinary remedies, and increase in frequency and degree so as to demand treatment. Dr. Keller, in the bulletin of the *Progrès Médical*, declares that in hydro-therapy alone had he been able to find a means of relieving this disorder, but total cessation of study also, for a period of two or three years, is absolutely necessary to cure the patient.

Penetration of Vertebral Canal by a Hair-Pin, causing Traumatic Meningitis.—A young girl, in taking off her hat, forced a hair-pin into her neck, which apparently wounded the spinal cord, as there was, at once, momentary motor paralysis of the side opposite to the injury; but sensory troubles of the same side, continuing for five days; loss of consciousness, vomitings, vertigo; marked pain and stiffness of the nucha up to the third day. Such were the symptoms upon which was based a diagnosis of traumatic spinal meningitis by Dr. Viry, who reports the case in the *Journ. de Méd. et de Chirurgie pratiques*. A month afterwards, a complete cure had followed.—*Revue de Thérapeutique*, No. 22.

A New Point in the Diagnosis of Femoral Luxations.—Dr. Treub, in reporting a case of obturator dislocation of the femur (*Centralblatt für Chirurgie*, No. 45), calls attention to the value of rectal exploration in order to ascertain the position taken by the head of the bone. In children the foramen ovale as well as the sciatic foramen is very easily examined by the forefinger when inserted into the rectum, and if the head of the femur is in either situation it may be readily felt. In adults it is available especially for the foramen ovale, but by the aid of an anæsthetic and with the hand in the bowel the sciatic

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foramen may also be explored. The author therefore recommends either for a diagnostic or merely for a demonstrative purpose, in more or less obscure cases of obturator or sciatic luxation, that the rectal method of examination be tried.

ERYTHEMATOUS ERUPTION AFTER ACUTE RHEUMATISM.—A case is reported (in *Revue de Thérapeutique*, No. 22), by M. Hallopeau, of a scarlatiniform erythema, coming on during convalescence and several days after an attack of acute articular rheumatism. It was accompanied by slight pulmonary congestion and albuminuria, and considerable fever, and was followed by desquamation. The patient shortly afterwards died with pericardial effusion and pulmonary and renal congestion.

THE HYPNOTIC EFFECTS OF ACETAL.—Experiments made upon man by Dr. Von Mering appear to establish the fact that acetal, which is a volatile substance something like ether, not only has an hypnotic action, but is also anodyne in its effects. It is administered by the mouth in dilute solution, hypodermically, or by the veins. Experiments upon animals demonstrate that it acts primarily upon the cerebrum, then upon the spinal cord and medulla oblongata, paralyzing respiration before stopping the heart. Death in the animals experimented upon resulted from apnœa. —*Berliner Klin. Wochenschrift.*

DIFFERENT PHYSIOLOGICAL EFFECTS OF CINCHONIA AND QUINIA.—M Laborde reported to the Société de Biologie that the results of experiments upon animals showed that quinia provokes stupor, while cinchonia, on the contrary, produces violent epileptiform convulsions even in comparatively small doses, the remedies being given hypodermically. He claims, therefore, that one cannot be substituted for the other in therapeutics merely because they are supplied by the same vegetable source, as they differ from each other in their effects as greatly as morphia and papaverine.—*Le Progrès Médical*, No. 45.

CARBOLIZED IODOFORM.—The following formula is given by C. Sherk (*Berliner Klin. Wochenschrift*) as a great improvement over plain iodoform:

℞ Iodoform., 10 gr.;
Acid. carbolic., .05 gr.;
Ol. menth. pip., 2 drops.

The acid is to be rubbed up with the iodoform, and the peppermint oil added subsequently. The disagreeable odor of the drug is completely covered, and it is not again developed, even at an elevated temperature.

ADMINISTRATION OF ASPIDOSPERMINE.—Eulenberg, in the *Medicinal-Kalendar* for 1883, gives the following formula for administering the active principle of quebracho, which, it has been claimed, may be used with benefit in all forms of dyspnœa without regard to the cause:

℞ Aspidospermine, 1 grm. (gr. xv);
Aquæ destillatæ, 50 grms. (f℥jss);
Acidi sulphurici, q. s. ad solve. M.

Dose, 1 gramme (15 minims), containing 2 centigrammes (gr. ⅓) of the remedy, or more.—*Le Progrès Médical.*

ATROPHY OF GASTRIC GLANDS A CAUSE OF PERNICIOUS ANÆMIA.—In an article entitled "Bijdrage tot de Studie der Progressive Perniceuze Anæmie" (*Weekblad van het Neder. Tijdschrift voor Geneeskunde*, 1882, No. 18), Dr. W. Nolen communicates the clinical history of two cases of this disease in which the post-mortem examinations revealed interstitial inflammation of the mucous membrane of the stomach, with partial or total atrophy of the gastric glands. The anæmia appeared as the result of the stomach-affection.—*Centralblatt für Med. Wissen.*, No. 38.

PROCTITIS FROM PLUM-STONES.—A case is recorded in the *Deutsch. Med. Wochenschrift* (No. 10, 1882) where proctitis and paralysis of the anus was found to be due to the impaction of plum-stones, of which one hundred and thirty-seven were removed. Cold-water injections and castor oil completed the cure.

ECZEMA OF THE GENITALS.—Devergie recommends:

℞ Alumin., 10–20 grammes;
Aquæ, 500 "

Or the following:

℞ Hydrarg. chlorid. corrosiv., 10–20 cgrm.;
Aquæ destillat., 500 grammes,

in solution, applied three times a day.—*La France Médicale.*

BORACIC ACID FOR RINGWORM.—

℞ Acid. boracic., gr. xx;
Alcoholis, f℥j;
Ætheris, f℥j. M.

Sig.—To be forcibly rubbed into the affected parts of the scalp three times daily with a rag or moderately stiff brush. The head also to be thoroughly washed each morning with soap and hot water.—CAVAFY.

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PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, JANUARY 13, 1883.

EDITORIAL.

THE UNITED STATES PHARMACOPŒIA.

No. 3.

THE additions to the Pharmacopœia are very numerous, as will be seen by reference to the list, embracing two hundred and fifty-eight drugs or preparations, the names of which we print in another column. A number of these additions are, to our thinking, very foolish, betokening a return to mediæval medicine, or an undue fondness for the herbalist. Such are Bryony, Menispermum, Picrotoxin, Staphisagria, Pulsatilla, Calendula, and perhaps Frangula and Hamamelis; but no great harm is done by these recognitions, except to the much-suffering medical student, as no physician is forced to use a remedy because it is officinal, or even to "bother his head" about it, unless he so wishes.

The useful additions are very important, and in a few cases new preparations have been originated which bid fair to be very valuable. In commenting upon these additions, we can only find space for discussing a few important remedies of the latter class, and for pointing out a few facts in regard to others. In the fifteenth edition of the United States Dispensatory, which will appear during the coming month of February, our readers will find all further information.

The first addition upon the list is a class of new preparations, known as Abstracta, or Abstracts, which in some measure correspond to the so-called "powdered extracts" that in the last few years have been creeping into commerce. A very important feature about the officinal abstracts is that they are of the nature of extracts to which sugar of milk has been added in such proportion as to produce a product having a definite relation to the crude drug: they are in all cases double the strength of the drug which they represent, are prepared by very careful formula, and are dry powders, which may be kept for years without change. Because they are of more definite strength than extracts, and are pharmaceutically more manageable, they ought to be useful preparations. The dose is, of course, half that of the drug represented. For their origination and introduction we are chiefly indebted to Prof. Joseph P. Remington.

Dilute Hydrobromic Acid is a useful addition, enabling the practitioner to obtain a definite preparation of this important remedy. It is prepared by a process based upon that published in 1878 by Dr. Squibb, and contains ten per cent. of the absolute acid. It may be given in doses of two fluidrachms, corresponding, in the amount of bromine contained, with twenty grains of bromide of potassium. It is plain that the dose usually administered is much too small, and it will probably be found that a tablespoonful is only a moderate dose. It should always be well diluted, preferably with syrup.

Argenti Nitras Dilutus contains only fifty per cent. of the nitrate, and will probably prove a useful addition to the surgeon's armamentarium. Bismuthi et Ammonii Citras is a soluble preparation of bismuth which does not resemble at all the old insoluble salts of bismuth in its action upon the intestine, but is distinctly astringent, and in large amount irritant. It may be given in doses of five grains, in dilute solution, for diarrhœa of relaxation. In cases of asthma, the practitioner can now write for Charta Potassii Nitratis with the satisfaction that he will obtain a definite remedy. Chrysarobinum is the chrysophanic acid of commerce.

Collodion Stypticum contains twenty per

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cent. by weight of tannic acid, and only a little over two per cent. of pyroxylin: of course the film left behind by evaporation will be chiefly tannic acid. The preparation requires testing in practice before a verdict can be given regarding its value, but will probably afford an excellent method of making a permanent application of tannic acid. Elaterinum has been made officinal for the purpose of securing a precise preparation. It is a little stronger than the best elaterium, and may be given in doses of one-tenth to one-eighth of a grain. The Extractum Aloes Aquosum is an excellent preparation of the drug, fully representing it,—indeed, being little more than purified aloes. The making of Extract of Malt officinal takes away the excuse for the use by the profession of proprietary Extracts.

Of the fluid extracts it is proper to direct especial attention to the Extractum Aromaticum Fluidum, which contains the activities of cinnamon, cardamom, ginger, and nutmeg, and ought to be frequently used as a flavoring stomachic addition to mixtures, or by itself as a carminative, in doses of three to ten drops. When the name of Extractum Rhois Glabræ Fluidum was given, the Committee of Revision forgot that a busy practitioner objects to having to commence writing a prescription on Monday in order to get through with it during the week. The remedy is, however, a very valuable basis for gargles, acting by its large amount of tannic acid and by its acid malate. Now that Hyoscyamin is officinal, it is to be hoped that apothecaries will see that the alkaloid they dispense conforms with the officinal tests, so that order may be brought out of the heterogeneous mass which circulates in commerce under the name of Hyoscyamine. The same remarks might also be made concerning Codeine.

For want of space, we must postpone the further consideration of the Pharmacopœia until our next issue.

A POLYCLINIC AND COLLEGE FOR GRADUATES IN PHILADELPHIA.

APPLICATION has been made to the present Legislature of Pennsylvania for a charter for a post-graduate medical school, to be located in Philadelphia. It is intended to model this institution upon the two in New York, which are reported to have achieved already considerable success. We will not anticipate the announcement of this new school, which will soon be issued, but may state that the several branches, which have already been very favorably apportioned, include some of the best-known names in the profession of this city. A fund of sixty thousand dollars has been guaranteed for the purchase of a suitable structure for the lectures, which, it is understood, will be delivered near the centre of the city, probably not far from Pennsylvania Hospital. At these lectures, delivered by prominent specialists upon the several departments of medicine, tickets can be taken for one or more, according to the choice of the student. These practical courses apparently have been growing in favor of late years. It was to meet this want that a post-graduate course was instituted at the University two years ago, which has been highly successful. If the recent graduate be like a young marsupial (in that he is cast forth into the cold world before he is well able to go alone), to which he has been aptly compared by a prominent obstetrician of this city, it would seem as if such an institution as a post-graduate course of practical instruction would be not an advantage only, but a positive necessity, more especially in the absence of the much-needed hospital facilities and experience denied, perforce, to the majority of medical students.

THE FOLLOWING POWDER is commended as a specific for the removal of condylomata:

℞ Hydrarg. chlorid. mit., ʒi;
Acid. borac., gr. x.
Ft. pulv.

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BACILLUS TUBERCULOSIS.

IT is probably known to most of our readers that Dr. Schmidt, of New Orleans, declares that the Bacillus tuberculosis of Koch is not an organism, but a crystalline body. Specimens sent to Dr. William Hunt by Dr. Schmidt seem to show that Dr. Schmidt is correct in affirming that what he has thought to be Koch's bacillus is a crystalline body. The specimens have been examined by Prof. Leidy and Drs. H. F. Formad and I. Gibbons Hunt, who all unite in asserting that they contain fat-crystals, but do not show any bodies corresponding with the bacillus as manifest in the preparations made by Dr. Formad, which accord with the assertions of Koch. There can be no doubt as to the existence of the Bacillus tuberculosis, though its etiological relation with tuberculosis is at present very doubtful.

CORRESPONDENCE.

CHICAGO LETTER.

THE trial of the woman Sturla, for the murder of a Mr. Stiles, has attracted much attention from the medical profession of this city. The proceedings were remarkable for the character of the medical testimony. The defence set up the plea of insanity, and it would appear that though there was no evidence bearing upon the woman's past history, showing a suspicion of insanity, yet the defence called medical witnesses who declared the prisoner the subject of hystero-epilepsy, emotional and moral insanity, etc. The result of the trial is not calculated to beget popular confidence in expert testimony.

The medical schools of the city have full classes, and, if the aggregate be considered, the number far exceeds that of any former year. It is to be regretted, however, that as much cannot be said of the *personnel:* the general standard, as regards educational preparation and fitness, is below that supposed to be aimed at by most of the schools. The homœopaths have a largely increased number, —one of the two schools having about three hundred, forty of which are women. In consideration of the reputation of this school for easy graduation, this preference on the part of the fair may mean something. The steadily increasing numbers graduated by our schools each year constantly suggest the question as to what becomes of the needless reinforcements. This city is said to have—all kinds, regular and otherwise—about one physician to every three hundred and sixty inhabitants; and yet they come.

Members of the profession have lately received their share of attention at the hands of the numerous highwaymen that have for some time past infested the city. Within a fortnight two medical men have been knocked down and robbed, one being so seriously injured as to excite great anxiety for his recovery; the latter was passing from his office to his residence, but a block away; the other was called early in the night to a patient near by. Both happenings were in the most respectable parts of the city.

Scarlet fever, which had prevailed quite extensively during the fall, is now declining, there being 288 cases reported for November, with 37 deaths, and for twenty-eight days of December a total of 188 cases, with 21 deaths. The disease continues mild in character, and to this may be attributed its subsidence. Of smallpox there have been 65 cases for November, and 48 cases for twenty-eight days of December.

The following is an extract from a letter received by a gentleman residing in this city, and goes to show how highly we are esteemed by our South American neighbors. "Doctor, I want you to get me two diplomas, one for a great friend of mine here as an M.D., the other for an apothecary. Of course I do not dream of a legitimate document, but there are many to be sold at any price, and we can fill in the names here, and whatever the cost I will forward you." The writer had evidently heard of the "Bellevue Medical College" of Massachusetts, and perhaps of others not so far away.

F. W. M.

December 28, 1882.

PROCEEDINGS OF SOCIETIES.

NEW YORK ACADEMY OF MEDICINE.

A STATED meeting was held December 21, 1882, FORDYCE BARKER, M.D., LL.D., President, in the chair.

The Northwestern Medical and Surgical Society of New York donated the sum of one hundred dollars to the journal fund of the Academy. The thanks of the Academy were tendered, through its President, to the Society for its generous gift.

Dr. AUSTIN FLINT presented to the Academy, on behalf of James Platt White, of Buffalo, a marble bust of the late Prof. White, of Buffalo. It was the work of J. G. Mitchell, sculptor, of Rochester.

Dr. T. GAILLARD THOMAS then read a paper entitled, "A Contribution to the Sub-

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ject of Removal of the Uterine Appendages (Tait's Operation) for Recurrent Pelvic Inflammations, with Pathological Specimens."

In the issue of the *British Medical Journal* for July 29, 1882, Mr. Lawson Tait, of Birmingham, England, enunciated views which were entirely at variance with those heretofore held with reference to certain pelvic diseases, and made extended remarks on the diagnosis and treatment of chronic inflammation of the ovary. Tilt had before stood almost alone as a firm advocate of the claims of ovarian pathology. The views now advanced by Tait, if accepted, were destined to open up a new field and exert upon this department of medical science a new influence.

The following points might be given as the most original and valuable views enunciated by Mr. Tait:

1. He assumes that the view formerly held, that laparotomy and allied operations should be postponed until absolute risk to the life of the patient rendered them necessary, should be abandoned, and that in the hands of the expert they are so far from danger as to be justifiable even when life is not jeopardized.

2. That the usually accepted doctrine that menstruation is dependent upon ovulation is wholly erroneous.

3. That the ovaries have nothing whatever to do with menstruation, and that this phenomenon is dependent upon the Fallopian tubes.

4. That given cases of abnormal menstruation are justifiably treated and are relievable in no other way than by extirpation of the ovaries and the tubes.

5. That in chronic ovarian disease the tubes are invariably involved, and that in most cases it is the tubes which are chiefly at fault.

6. That the mortality in the last thirty-five operations having been only one, even this slight loss of life is susceptible of diminution in the future.

7. That many of those cases heretofore regarded as instances of recurring pelvic peritonitis or cellulitis are really cases of tubal dropsy and ovarian disease. This last statement did not appear in the paper alluded to, but was received from Dr. T. A. Emmet, who obtained it from Mr. Tait in a private conversation.

Dr. Thomas stated that the removal of the uterine appendages was performed for the purpose of relieving severe menstrual disorders and nervous disturbances, which did not so much jeopardize the life of the patient as make it miserable. He alluded briefly to the history of oöphorectomy, and then stated that his object was not to consider Tait's views analytically with regard to the removal of the uterine appendages, but simply to report four cases in which tubal dropsy had existed associated with chronic ovaritis as described by Tait. The cases reported were too recent to admit conclusions to be drawn with reference to what might be the ultimate results.

Case I.—A colored woman, 30 years of age, the mother of one child aged eight years. Menstruation had been perfectly normal up to the period of weaning the child, eighteen months after delivery. She then suffered from symptoms resembling those of pelvic peritonitis and cellulitis, accompanied by a discharge from the vagina. The menstrual periods were irregular, and the flow was scant. Locomotion was painful. She had an attack of severe pelvic inflammation, similar to that already described, every year. During the last eighteen months she had suffered almost constantly from severe pain in the region of both ovaries and across the back, from leucorrhœa, and during the last six months from a profuse loss of blood at the menstrual periods. The uterus was large, and anteverted. A few small fungoid growths were scraped from the lining membrane. An anteversion pessary did actual harm. On more careful examination, he detected enlarged ovaries, and suspected that it was a case of coincident ovaritis and tubal dropsy, as described by Mr. Tait. An explorative incision was made, and, finding small cysts of the ovaries and distention of the Fallopian tubes, they were removed. Antiseptic precautions were observed in this and the following cases, with the exception of the use of the spray. The patient made an excellent recovery, and had passed one menstrual period without having any sanguinolent discharge.

Case II.—Patient aged 25 years. Nine months after first confinement had an attack of pelvic inflammation. Since then menstruation had been irregular and painful; there was constant leucorrhœa and difficulty in locomotion. Upon examination, there was found to be partial laceration of the cervix and perineum, with exquisite tenderness in the region of the ovaries and all round the uterus. Tait's operation was performed. The ovaries were not much diseased, but contained small cysts. The tubes were distended by large accumulations of pus. Firm adhesions were present. The patient recovered without any marked rise of the pulse or temperature.

Case III.—Patient aged 22 years. Began to menstruate at the fourteenth year, and suffered from the most dreadful dysmenorrhœa. The pain during the past year had been unceasing, and was greatly increased at the menstrual periods. The ovaries were found upon examination to be tender, enlarged, somewhat prolapsed. Tait's operation was performed. The ovaries were found to contain small cysts. The lining membrane of the tubes was inflamed, and the tubes contained pus, which, however, was not confined within them so as to create dropsical enlargement. Recovery took place without an unfavorable symptom, and the next period had

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Grindelia Squarrosa.
Guaco Leaves.
Guarana.
Helianthella.
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Horsemint.
Iron Wood.
Jaborandi.
Jamaica Dogwood.
Jamaica Pimento Leaves.
Judas Tree.
Juriballi.
Kamala.
Kava Kava.
Kooso Flowers.
Lily of the Valley Flowers.
Lily of the Valley Root.
Manaca.
Mango Bark.
Mango Fruit.
Manzanita Leaves.
Mercury Weed.
Mistletoe.
Musk Root.
Paraguay Tea.
Pulsatilla.
Quebracho Bark.
Quinine Flower.
Rhus Aromatica.
Sabbatia Campestris.
Sandal Wood.
Sarracenia Flava.
Sassy Bark.
Saw Palmetto.
Shepherd's Purse.
Sierra Salvia.
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just been passed without any menstrual flow, and the patient was comfortable.

Case IV.—Patient unmarried, 27 years of age. Menstrual life began at the age of fourteen years, with pain and exceedingly severe dysmenorrhœa. Two years ago she had an attack of pelvic peritonitis, since when she had been a most wretched invalid. She had suffered excessively from repeated attacks of pelvic peritonitis occurring at the menstrual periods, and came near losing her life during one of these attacks in September last. At the time the operation was performed, her appearance resembled that of a patient in the third stage of pulmonary consumption; but it was impossible to restore strength in any degree, and it was decided to operate at once. The ovaries were found to contain small cysts. The tubes were dropsical. The operation was a difficult one, and no one who witnessed it could avoid making an unfavorable prognosis, the patient's condition was so extremely low. She died on the sixth day after the operation.

These four cases covered the extent of Dr. Thomas's experience with this operation. He referred to the successful results obtained with it by Mr. Tait, which had been as wonderful as the success of Keith and Wells in the performance of ovariotomy, and stated that it behooved American surgeons to investigate and determine, if possible, why better results were obtained abroad than here.

Dr. H. J. GARRIGUES then read a paper entitled "Gastro-Elytrotomy (Thomas's Operation) compared with Oöphoro-Hysterectomy (Porro's Operation)."

Gastro-elytrotomy had been performed three times during the past four years, the operators being Hime, of Sheffield, Edis, of London, and Gillette, of New York. These, together with the cases which had been reported before, made eight in all, in which there had been four recoveries and four maternal deaths. According to Harris, of Philadelphia, Porro's operation had been performed eighty-four times, with thirty-seven recoveries and forty-seven deaths. One of the principal objections which had been urged against gastro-elytrotomy was that it could not be carried out according to the strict rules of antiseptic surgery; but Dr. Garrigues believed that the operation could be rendered sufficiently antiseptic to justify its further trial.

The danger from hemorrhage was much greater in Porro's operation than in Thomas's. Attention was called to the different methods which had been employed for controlling hemorrhage, such as the use of the écraseur, the elastic ligature, the soft-rubber tube of Esmarch, etc.

Shock and exhaustion so far had been the only causes of death in Thomas's operation. He believed that the danger from these sources would be much less if the subjects were chosen and the operation were done earlier. The danger from shock was much less in gastro-elytrotomy than in Porro's operation, while that from exhaustion was greater on account of profuse suppuration which almost inevitably occurred. Peritonitis was infinitely less liable to occur in gastro-elytrotomy than in Porro's operation. Certain accidents, as tetanus, heart-clot, etc., were liable to occur equally in both operations. In five cases in which the intra-peritoneal method of treating the stump had been tried, four of the patients died.

In the country the old classical operation of Cæsarean section was usually preferable to any of its substitutes. In hospital practice gastro-elytrotomy should be the operation adopted if the cervix were dilated or dilatable. If the circumstances were such as to render operative interference necessary before dilatation had begun, Müller's operation was preferable.

DISCUSSION.

Both papers being before the Academy, Dr. POLK was requested to open the discussion. Dr. Polk first spoke with reference to placing the operation; and secondly, with reference to the difficulty of performing it as compared with Cæsarean section and the Porro-Müller operation.

In placing the operation he believed it to be a mistake to put it in direct antagonism to Cæsarean section or any of its modifications. There were certain conditions in which the Cæsarean section or some one of its various modifications was the only operation which could properly be performed. Again, there were cases in which Cæsarean section or some one of its substitutes had been performed, where gastro-elytrotomy would be the more appropriate operation. Among the former class of cases belonged those in which the cervix was not dilatable. Dr. Polk then traced the successive steps in the operation of gastro-elytrotomy, comparing the same with those in Porro's operation, and stated that if it were necessary the incision might begin as high up as anywhere between the crest of the ilium and the last rib; that it was unnecessary in this case at all to injure the peritoneum; that after having reached the transversalis fascia the sharp instrument should be no longer used; that danger of injuring the epigastric artery, the uterine artery, the ovarian vessels, the base of the bladder, and the ureter could easily be avoided. He also spoke at length of the method of entering the vagina, referred to the position of the uterine artery in the pregnant and non-pregnant state, and described the method of tilting the uterus during the extraction of the child, which is one of the most difficult steps in the operation. The upper part of the wound should then be carefully closed, while the lower part should be left open for the introduction of a drainage-

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tube, to extend down into the vagina. It would be evident to all that the dangers connected with Cæsarean section and its modifications were much greater than those connected with gastro-elytrotomy.

Dr. TAYLOR referred at some length to the statistics of the three operations, Cæsarean section, Porro's operation and its modifications, and gastro-elytrotomy, and reached the conclusion that in general the old classical operation gave better results and was to be preferred.

Dr. SKENE spoke of the ease with which gastro-elytrotomy could be performed, and the comparatively little danger attending it, but said that he thought that the operation had not been performed in a sufficient number of cases and under such circumstances as to justify us in comparing its statistics with those of the other operations alluded to.

Dr. LUSK had never witnessed gastro-elytrotomy, but he believed that with a contracted pelvis and a dilated cervix, gastro-elytrotomy was the operation which should be performed. But there were cases in which dilatation did not exist and gastro-elytrotomy could not be performed: in such cases it was necessary to have an alternative. According to the statistics which had been collected, Cæsarean section had almost invariably been performed under the most unfavorable circumstances, which in part accounted for the large mortality which had attended it. He believed that under more favorable circumstances and by closing the uterine wound far better results could be obtained. He also referred to the possible advantage to be derived from the method of dissecting up the peritoneum for a distance of about two-fifths of an inch, and then removing a melon-shaped piece from the wall of the uterus, so as to permit the peritoneal surfaces to be folded in and brought in contact by sutures, with the hope of obtaining quicker union of the edges of the wound.

Dr. GILLETTE thought that laparo-elytrotomy was not to be compared with Porro's operation, either with reference to danger or difficulty in its performance. He was not prepared to make the plea which Dr. Lusk had made for Cæsarean section. We might close the uterine wound in any manner whatever, still there was the danger of non-contraction of the organ, as often occurred even after normal labor.

Dr. T. A. EMMET remarked that he had had no experience in the performance of Tait's operation, but while abroad during the past summer he had seen as many as sixty specimens which had been removed by Mr. Tait during the last eighteen months. Dr. Emmet could not account for where all these cases came from, for out of numerous autopsies which he had had occasion to make some years ago, he found the condition present not more than a dozen times. Mr. Tait, in reply to his question as to what were the indications for the operation, could only state that in all of those cases of chronic pelvic inflammation which did not get well of themselves within a reasonable time, he opened the abdomen and invariably found this dropsical condition of the tubes, distended with serum or pus. The improvement which had taken place in the general appearance of the patients after the operation had been performed was very remarkable. While there could be no question with regard to Tait's success with the operation, Dr. Emmet did not yet feel prepared to resort to it, but was waiting for more light upon the subject.

The discussion was closed by Dr. GARRIGUES.

REVIEWS AND BOOK NOTICES.

INDEX CATALOGUE OF THE LIBRARY OF THE SURGEON-GENERAL'S OFFICE, U. S. ARMY. Vol. III. Washington, D.C., 1882. Pp. 1020.

The third volume of this extraordinary work is on our table, and it is not without increased interest in the progress of the publication of the work and a feeling of gratitude to the government and to the untiring energy of Dr. Billings that we glance over its heavily-laden pages.

This volume, Dr. Billings states, "includes 9043 author-titles, representing 10,076 volumes and 7386 pamphlets. It also includes 8572 subject-titles of separate books and pamphlets, and 28,846 titles of articles in periodicals. There are also catalogued 4335 medical portraits." The three volumes thus far published contain 30,629 author-titles, representing 23,041 volumes and 23,594 pamphlets; also 129,882 subject-titles, of which 100,760 are of articles in periodicals. There are also, as before noted, 4335 medical portraits catalogued.

The amount of labor represented in these three volumes is enormous, and, when we consider what the many ponderous parts will exhibit when the work is completed, is absolutely colossal.

The value of this work to the profession, and indirectly to the community, cannot be estimated in dollars and cents, and it is hoped that the government will throw no impediment in the way of its rapid completion by the want of a liberal appropriation.

E. Y. B.

THE TREATMENT OF CANCER. By JOHN CLAY, Professor of Midwifery in Queen's College, and Obstetric Surgeon to the Queen's Hospital, Birmingham, etc. J. A. Churchill, London, 1882.

This is a pamphlet of thirty-six pages of material published in the numbers of the

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Lancet for March 27 and October 2, 1880, and December 17, 1881. The author relates his experience in the use of Chian turpentine administered internally in cases of cancer of the female genital organs. Hoyle says, "When in doubt, take the trick." We advise to try Chian turpentine, although our faith will not remove the mountains of doubt engendered by a review of the use of other vaunted specifics for the eradication of morbid growths.

GLEANINGS FROM EXCHANGES.

THE RADICAL CURE OF HERNIA BY REMOVAL OF THE SAC AND STITCHING TOGETHER THE PILLARS OF THE RINGS.—In a suggestive paper read by Mr. Banks at the recent meeting of the British Medical Association, the results of thirty operations for hernia are presented by the oldest method of treatment,—extirpation of the sac. In twenty-one cases the operation was done for relief; in nine cases as part of the operation for strangulated hernia. There was complete failure in two cases, only partial success in four (the patients wearing a truss, but able to keep the hernia up with it, giving great relief). In fifteen cases the patients are now at work, with the parts firm, and without cough-impulse; some without a truss, some wearing a light one for precaution and not really requiring it. In seven the operations were too recently performed to test them. One of strangulated hernia died from collapse, and one patient died apparently from disease of the nervous system about a fortnight after the operation for its radical cure, but had quite recovered from the operation. The method adopted by Mr. B. is as follows. He employs thorough antiseptic treatment, and makes a point of having the pubes and parts around the anus most carefully shaved. In an inguinal hernia, the incision should commence at least an inch above the upper margin of the external ring, so that plenty of room may be given thoroughly to clear the pillars for the stitching. The sac is next freed from the surrounding tissues, and this is often much more troublesome than might be imagined. One is almost always tempted to think that it has been reached long before it really has: so that frequently, after a considerable amount of stripping has been done, it is found that it is not the sac at all that is being cleared, and the process has to be done over again. He says that it is this mauling of the loose cellular tissue of the scrotum that gives rise to nearly all the trouble that occurs in the way of suppuration. The sac ought to be fairly reached before any stripping of it is done. Another point is that, in the case of an old sac, the lowest point is intimately adherent to the tunica vaginalis; and, if it be roughly pulled upon, the testicle enclosed in the tunica comes bodily out of the scrotum,—not a very serious matter, it is true, but unpleasant to look at. The sac having been cleared, its contents are pressed up into the abdomen. When it is thin, there is no difficulty in making sure that it has been completely emptied; but, if there be the slightest doubt, it should be slit up and its interior examined. Adherent omentum, if in small quantity, he separates carefully, ties with catgut in one piece, and cuts it off; if in large mass, it should be split up into two or three portions, and ligatured with carbolized silk to insure a good knot that will not slip. One cannot be too careful about the securing of the omental stump before it is finally pushed into the abdomen, and every drop of bleeding should have ceased, both from the omentum and from the neck of the sac, before the next proceeding. This consists in pulling the sac well down and tying it as high up as possible. He uses two ligatures of strong catgut, as that material is apt to be treacherous. In case anything should happen to one, the other is there. With a curved needle, armed with strong silver wire, the pillars of the external ring are next pulled together, leaving only room for the spermatic cord at its lowest part. Two or three stitches suffice. These are cut short off and left *in situ*. A clean carbolized sponge put beneath antiseptic gauze for the first twenty-four hours makes the best dressing.

He lays especial stress upon the use of silver wire ligatures for joining the pillars of the ring, which are then cut off short and allowed to remain. This is the only point of novelty in the operation. For cases that are reducible and admit of invagination, he prefers the corkscrew operation of Dr. Spanton, of Hanley, which fulfils all that is required for a simple case, especially in a young person, when the sac is capable of being returned. In all other cases requiring a radical operation, this method by removal of the sac and complete occlusion of the canal he considers superior to all others, and by recent methods of performing operations with antiseptic precautions it is not a dangerous operation, especially in cases over thirty years of age, whilst its results from a curative or remedial point of view are most satisfactory.—*British Medical Journal*, November 18.

HYPNOTISM IN PARIS ON THE DECLINE.—In the Paris letter to the *Lancet* (November 4), the correspondent gives a lengthy report of the experiments made by M. Donato, who gave public *séances*, and who differed from Charcot in using for his magnetic experiments, instead of hysterical women, only young and presumably healthy men, with the exception of a single female assistant. These subjects were put through all the feats described by Charcot in his experiments on hypnotism, being apparently fully under the control of the operator's will. So much at-

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tention was given by the students to these exhibitions that Prof. Carmelli, of the Government School, gave an anti-magnetic demonstration, in which subjects were made to pass through exactly the same exercises without any pretence of magnetism. The *séance* was a complete success, and from that day M. Donato's glory began to dim, until, in an unfortunate hour, he dismissed his assistant, who thereupon made some damaging revelations as to the manner of conducting these exhibitions. In an interview with a journalist, she fully exposed M. Donato's tricks, and made some very interesting disclosures. Among other things, she told her interviewer that at times she was rather refractory, and could not fall asleep. M. Donato then resorted to the expedient of dosing her with opium, which made her feel so drowsy and stupid that he used to pinch her to keep her awake till the proper time arrived; but there were times when she was so sleepy from an overdose of opium that she could not be roused, and it was then that M. Donato had recourse to the young male subjects already referred to, who were regularly trained to go through the processes told off for them. She further avowed that, if she had a choice in the matter, she would by a great way prefer to have the pins thrust into her arm than be pinched as she was, as the latter operation caused her great pain, and her body was covered with boils in consequence. Nothing has been heard of M. Donato since these disclosures were made, and the rage for exhibitions such as he provided in Paris has consequently declined.

PYO-PNEUMOTHORAX SUCCESSFULLY TREATED BY RESECTION OF A RIB AND DRAINAGE.—Before the Manchester Medical Society, recently, Dr. Dreschfeld exhibited a patient who was admitted into the Manchester Infirmary on August 15, suffering with all the symptoms of pyo-pneumothorax. The patient, a man aged 49, had always enjoyed good health, with the exception of a cough which had troubled him much for the last twelve months. Five weeks before admission, he was suddenly taken ill with fever, shivering, and pain in his left side. A few days before admission, he was suddenly seized with intense dyspnœa, and at the same time expectorated large masses of pus. On admission, examination of the chest showed bulging of the left side, diminished movement, and displacement of the heart towards the right; tympanitic percussion-sound in the upper left side in front, dulness below, and dulness behind on the left side; diminution of fremitus and succussion, and metallic tingling in front, behind, and left side; increased fremitus, bronchial breathing, and moist râles above; diminished fremitus and absence of breathing below. The right side of the chest showed symptoms of extensive bronchitis. The pulse showed marked arterial tension. The urine, profuse, of low specific gravity, contained albumen and granular casts. There was no œdema nor ascites. Temperature 101.5°, with anorexia. The dyspnœa was so intense that the patient could not assume the recumbent posture. Large masses of fetid pus were continually being expectorated. From these symptoms, it was evident that the patient had suffered from empyæmia, which, bursting into the lung, already affected with chronic broncho-pneumonia, and communicating with a bronchus, caused the establishment of a pyo-pneumothorax. The patient also suffered evidently from commencing granular kidney. On August 18 a portion of the seventh rib was resected, and the pus evacuated, and a drainage-tube inserted. After this the patient made a very rapid recovery; the fever subsided; the cavity completely closed, and the wound is now quite healed; the left lung expanded again fully, and all the symptoms of disease in the left lung disappeared. In less than two months the patient had gained twenty-two pounds in weight. The kidney-disease, as far as pulse and condition of urine showed, remained the same.—*British Medical Journal.*

ON THE EXCISION OF CHANCRE.—A very able paper by Dr. P. A. Morrow, on the excision of chancre as a means of aborting syphilis, which has already been noticed in these pages as part of the proceedings of the New York Academy of Medicine (meeting held November 16), appears in full in the *Journal for Cutaneous and Venereal Diseases* for December. In this article the author very carefully reviews the literature of the subject, which is now sufficiently extended to warrant practical deductions, and he endorses the opinion now generally held of the inutility of this measure, since, when the chancre appears, the patient is already syphilitic. He concludes (1) that the facts of clinical experience, as well as deductions from analogy and experiment, are opposed to the theory of the local nature of chancre upon which the practice of excision is based; (2) that the practice of excision of the chancre, as a means of aborting syphilis, is condemned by its clinical results, when these results are weighed in the balance of discriminating judgment, due regard being had to the possibilities of error; (3) that these sources of error are comprehended under doubtful diagnosis, insufficient observation, both as regards time and method, and *post hoc* conclusions; (4) that in cases where secondary accidents fail to appear after excision there is no positive evidence that it had an abortive influence, since experience proves that sores with all the typical signs of infecting chancre are sometimes not followed by constitutional syphilis; (5) that there is no evidence that excision of the chancre attenuates the syphi-

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litic virus and modifies the intensity of general symptoms, since the benignity or malignancy of syphilis is a matter of individual constitution; (6) that it cannot be recommended as a local adjuvant, since it is opposed to the principles of sound surgery to remove, by an operation involving loss of tissue and an indelible cicatrix, an accident which always disappears by a process of spontaneous resorption, leaving, as a rule, no posthumous evidence of its existence.

THE PHYSIOLOGICAL ACTION OF THE SALTS OF SODIUM, AMMONIUM, AND POTASSIUM.—Sydney Ringer, having made some experiments upon the frog's heart isolated from the body, reports (*Lancet*, November 4) that the salts of sodium, ammonium, and potassium all arrest the ventricle in diastole, but differ in their mode of action. Potassium salts tend most markedly to arrest or suspend spontaneous contractions, although the heart may be proved contractile by suitable excitation. Ammonium salts show no such tendency: the heart beats often with increased frequency up to the very end,—*i.e.*, as long as contractility persists. Sodium salts are intermediate, but nearer potassium than ammonium. The sodium salts, however, show very little influence upon contractility, while potassium and sodium act with almost equal intensity. After the heart has been influenced by potassium salts, it very rapidly loses its power of responding to faradization. This does not occur at all, or only to a very slight extent, with the other bases. It is held that these effects are carried out in all the compounds of these bases, although they may vary in intensity. A certain relation between potassium, sodium, and ammonium salts is manifest, potassium standing first as most poisonous and threatening in two directions; ammonium coming next, its action being restricted to destruction of contractility; sodium coming last, and ranking as but very slightly poisonous comparatively with either. These experiments, indeed, would make potassium salts some fourteen or fifteen times as poisonous as sodium salts. The bromide and chlorate of sodium are recommended as substitutes for the corresponding potassium compounds in many cases.

PREVIOUS SYMPTOMS IN TYPHOID POINTING TO PERFORATION.—In a communication by Dr. Byers before the British Medical Association several cases are reported of death from perforation from typhoid ulceration of the small intestine. The following clinical features are believed to indicate the appearance of this serious accident:

1. The gravity of the case. Perforation is met with most frequently in the more serious cases of the disease. Liebermeister and Murchison both agree in this: the latter states that "in a large proportion of cases of perforation the previous symptoms are severe, and diarrhœa, as might be expected, is a prominent symptom. This was the case in sixty out of sixty-nine of my patients. In eleven of the sixty the symptoms of the peritonitis were preceded by considerable intestinal hemorrhage, and in many there was an unusual amount of abdominal pain."

2. As regards great tympanites, Sir W. Jenner says, "A single deep slough-formed ulcer will paralyze the action of the bowel and lead to such an accumulation of flatus as produces enormous distention of the abdomen." It is just in such a case that perforation would be likely to occur.

3. Continued elevation of temperature after the third week, in the absence of any complication, usually points to severe intestinal lesion.

4. As to constipation, Sir William Jenner has pointed out that "a single deep ulcer will paralyze the action of the bowel, and so cause constipation."

5. Another symptom is severe tremor.

6. Protracted headache in the early stages is believed by Dr. Broadbent to denote an unusually severe affection of Peyer's patches.

7, Dr. Cayley has directed attention to the value of *tache cérébrale* in enteric fever. He says it often lasts for some time after convalescence has set in, and he regards its persistence as an indication that the intestinal ulcers have not yet healed, and that therefore the patient is still liable to relapses and to the complications attending unhealed ulcers.

HEMORRHAGE FROM THE THROAT AFTER SCARLATINA, REQUIRING LIGATURE OF THE COMMON CAROTID ARTERY.—Before the Clinical Society of London, recently, Mr. A. J. Pepper read the notes of a very interesting case, of a man, 30 years of age, who passed through an attack of scarlet fever and several weeks afterwards had a chill and complained of sore throat. Two days later the uvula was large and translucent, and the soft palate red and swollen. The next day he complained of great difficulty in swallowing, and throbbing of the left side of the throat. Four hemorrhagic patches had appeared at the junction of the hard and soft palates, with a large and gelatinous bleb on the left side. Three hours later, the throat, especially on the left side, became rapidly swollen, accompanied by a feeling of suffocation; soon after he brought up a considerable quantity of blood. The swelling and difficulty of breathing then subsided, and, at the same time, complete aphonia appeared. The alternate enlargement of the neck, hemorrhage, and subsidence of the swelling were repeated several times, until the patient was in a really critical condition: he had lost about forty ounces of blood, and there was no sign of an arrest of the hemorrhage. Considerable bulging of the left side of the pharynx was noticed, and marked dyspnœa and aphonia. At a consul-

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tation between Dr. Mahomed, who had the man under his charge, and Mr. Pepper, it was thought dangerous to cut into the post-pharyngeal abscess, and it was decided to tie the left common carotid artery at the upper border of the omo-hyoid muscle: this was completely successful, and the case recovered.

A DEVICE FOR DRAINAGE OF THE BLADDER FOR A CASE OF OBSTINATE PROSTATIC OBSTRUCTION.—A man, 79 years of age, suffering from enlarged prostate and retention of urine, was relieved by Dr. Wilson Hope by tapping the bladder over the pubes. Various methods were tried in order to maintain the artificial opening, but practical objections were found to all, until the following device was hit upon. On each side of the puncture a piece of adhesive plaster was applied. A soft catheter having a bone tip was then introduced; a circular piece of soft leather was next perforated and slipped over the catheter down to the bone tip; it was kept in position by passing two cross-pieces of silk gelatin plaster, one above and the other below the puncture, stuck down to the upright pieces of resin-plaster. The distal end of the soft catheter being stopped with a plug, it was drawn through a perforated home-made belt, made of bed-tick, to prevent his clothing from rubbing the plaster. This enables the patient also, by drawing in his belly somewhat, to pass a feather behind the bone tip and remove any discharge that may show itself there. The use of this device for six months has given great relief and comfort to the patient.—*British Medical Journal*, November 11.

SYMPTOMS OF POISONING BY IODOFORM.—In view of professional responsibility attending the use of this agent, and the frequency of its application in gynæcological practice, we deem it proper to insert the following observations resulting from the experiments of Schede at the hospital of Hamburg. The following are the toxic effects observed by Schede:

1st. Increase of temperature, which rises to 104° F. and above, without appreciable cause.

2d. Coincident with the fever a physical depression is manifested,—headache, loss of appetite, the breath bears the odor of iodoform, the pulse is frequent, small, soft, and very compressible. These symptoms cease with the cessation of employing this therapeutic agent.

3d. The frequency of the pulse may rise to 150 to 180 pulsations per minute. Added to the first symptoms of inquietude is a fever, which becomes more and more intense; and if the use of the medicine is not discontinued, death may result. A sign of the gravest portent is the appearance of symptoms of acute meningitis or of depressive phenomena analogous to melancholia.—*Obstetric Gazette.*

SHORTENING OF ROUND LIGAMENTS FOR THE CURE OF SOME DISPLACEMENTS OF THE UTERUS.—An important paper was read on the above subject on November 23, before the Liverpool Medical Institution, by Dr. William Alexander. Considering the great number of cases of prolapsus of the uterus and retroversion that are practically incurable, Dr. Alexander sought for some other method of treatment that had at least the one merit that it had not already proved its uselessness. After many operations and investigations on the dead body, he decided, finally, to try the effect of cutting down on the inguinal ring, seizing the round ligament, drawing out the "slack," and then, after ascertaining the exact redression of the uterus, fixing the ligament thus tightened in its new situation. The results obtained were very encouraging, and in some earlier instances have, after a lapse of six or eight months, lost none of their encouraging character.—*Medical Press and Circular.*

SUCCESSFUL EXTIRPATION OF THE LARYNX.—A blacksmith, 42 years of age, suffering with epithelioma of the larynx, was operated upon by Mr. Walter Whitehead, and the entire larynx, including the thyroid and cricoid cartilages, and the two upper rings of the trachea were removed. The epiglottis remained intact. Tracheotomy had been performed as a preliminary measure nearly a month before. After the removal of the larynx, the voice was not immediately lost, but for several weeks he could speak in a monotone and could be heard at a distance of six feet; but gradually the sound faded, and eventually disappeared altogether. The patient made a good recovery.—*Lancet*, November 4.

STRAMONIUM-POISONING SUCCESSFULLY TREATED BY MORPHIA.—A little girl, 10 years of age, having eaten the contents of several green pods of *Datura stramonium*, was seized with symptoms resembling hyoscyamus- or belladonna-poisoning. She was treated with emetics, which failed to act until apomorphia (one-twenty-fourth of a grain) was injected under the skin. Shortly after, free vomiting occurred. The acetate of morphia (one-sixth of a grain) was administered hypodermically, and the symptoms were then greatly relieved, and soon passed away.—*Lancet*, November 4.

PRURITUS ANI.—A correspondent writes to the *Cincinnati Lancet and Clinic* that he had for twenty years suffered from that annoying disease, pruritus ani, and had placed himself under the care of various physicians at different times, but without the least benefit. About two years ago, hearing that balsam Peru would relieve that trouble, he tried it, and it gave immediate and entire relief. The disease still clings to him; but when it becomes annoying, a single application of the balsam affords relief. Of all the medicines which he had tried, this is the only one that has had any effect.

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MISCELLANY.

THE COLLEGE OF PHYSICIANS held an election for officers January 3, with the following result:

President.—Dr. Alfred Stillé.

Vice-President.—Dr. J. M. Da Costa.

Secretary.—Dr. Richard A. Cleemann.

Treasurer.—Dr. Chas. Stewart Wurts.

Curator.—Dr. Thomas Hewson Bache.

Honorary Librarian.—Dr. J. H. Hutchinson.

Recorder.—Dr. J. Ewing Mears.

Censors.—Drs. Lewis Rodman, Edward Hartshorne, William Goodell, Samuel Lewis.

Councillors.—Drs. S. Weir Mitchell, W. S. Forbes.

Committee on Publication.—Drs. J. M. Da Costa, Jas. H. Hutchinson, Roberts Bartholow.

Library Committee.—Drs. S. Lewis, Walter F. Atlee, I. Minis Hays, S. W. Gross, Morris Longstreth.

Committee on Mütter Museum.—Drs. William Hunt, S. Weir Mitchell, John H. Brinton.

Hall Committee.—Drs. Edward Hartshorne, Lewis Rodman, T. H. Bache, R. H. Alison, W. S. Forbes.

Committee on Lectures.—Drs. Samuel D. Gross, Joseph Leidy, William Goodell, William F. Norris, John H. Packard.

Committee on the Directory for Nurses.—Drs. W. W. Keen, S. Weir Mitchell, A. H. Smith.

THE PHILADELPHIA COUNTY MEDICAL SOCIETY, at the stated meeting held at the hall of the College of Physicians, January 2, held the annual election for officers. The following were elected officers for 1883:

President.—Dr. Wm. M. Welch.

Vice-Presidents.—Drs. Addinell Hewson, W. R. D. Blackwood.

Recording and Reporting Secretary.—Dr. Henry Leffmann.

Corresponding Secretary.—Dr. H. Augustus Wilson.

Assistant Secretary.—Dr. Jos. S. Neff.

Treasurer.—Dr. L. K. Baldwin.

Librarian.—Dr. C. M. Seltzer.

Censor (for five years).—Dr. L. N. Hatfield. For unexpired term of Dr. John G. Stetler, Dr. W. T. Taylor.

Delegates to American Medical Association.—Drs. D. Hayes Agnew, John Ashhurst, H. St. Clair Ash, O. H. Allis, L. K. Baldwin, W. R. D. Blackwood, C. H. Burnett, Robert Burns, F. J. Buck, L. S. Clark, Jas. Collins, J. Solis Cohen, Robt. B. Cruice, H. Y. Evans, A. Frické, Wm. Goodell, S. D. Gross, S. W. Gross, A. D. Hall, N. L. Hatfield, H. Leffmann, R. J. Levis, Jos. Leidy, Chas. K. Mills, Geo. V. McCracken, J. Cheston Morris, A. Nebinger, H. W. Newcomet, Jos. S. Neff, Wm. Pepper, S. D. Risley, J. D. Schoales, A. H. Smith, H. H. Smith, Wm. T. Taylor, L. Turnbull, J. B. Walker, H. Augustus Wilson.

Delegates to Medical Society of the State of Pennsylvania.—Drs. Samuel Ashhurst, B. F. Baer, Henry Beates, E. T. Bruen, R. R. Bunting, J. H. W. Chestnut, R. A. Cleemann, R. G. Curtin, W. R. Cruice, C. W. Dulles, G. B. Dunmire, J. T. Eskridge, Emil Fischer, M. S. French, T. H. Fenton, W. H. H. Githens, Geo. Hamilton, A. G. B. Hinkle, F. P. Henry, Wm. Hunt, J. H. Hutchinson, E. C. Hine, L. B. Hall, J. F. Holt, I. Minis Hays, C. T. Hunter, F. B. Hazel, W. S. Janney, W. W. Keen, J. V. Kelley, P. D. Keyser, S. R. Knight, H. Leaman, Philip Leidy, J. R. Levan, J. R. Ludlow, J. A. McFerran, J. Ewing Mears, A. V. Meigs, J. D. Mercur, E. E. Montgomery, F. Muhlenberg, C. B. Nancrede, G. D. O'Farrell, M. O'Hara, Wm. H. Pancoast, Wm. H. Parish, C. A. Oliver, Wm. G. Porter, A. G. Reed, E. Richardson, J. G. Richardson, T. C. Rich, W. M. L. Rickards, J. B. Roberts, Carl Seiler, C. M. Seltzer, J. V. Shoemaker, A. F. Shelly, J. G. Stetler, W. S. Stewart, J. H. Taylor, C. H. Thomas, S. N. Troth, Ch. Turnbull, G. W. Vogler, J. W. Walk, J. Wm. White, W. M. Welch, D. F. Willard, J. C. Wilson, C. F. Wittig, E. W. Watson, D. F. Woods, F. Woodbury.

Ex-officio Delegates.—Drs. O. H. Allis, Wm. B. Atkinson, Benjamin Lee, John G. Lee, Henry Leffmann, James Tyson.

THE FACULTY OF THE PHILADELPHIA POLYCLINIC AND COLLEGE FOR GRADUATES IN MEDICINE.—The faculty, so far as arranged, of the Polyclinic, is constituted as follows: Dr. Richard J. Levis, operative and clinical surgery; Dr. William Thomson, diseases of the eye; Dr. Thomas G. Morton, general clinical and orthopædic surgery; Dr. Charles H. Burnett, diseases of the ear; Dr. J. Solis Cohen, diseases of the throat and nose; Dr. Henry Leffmann, clinical chemistry and toxicology; Dr. E. O. Shakespeare, microscopy and histology; Dr. Charles K. Mills, diseases of the mind and nervous system; Dr. John B. Roberts, applied anatomy and practical surgery; Dr. James C. Wilson, diseases of the chest and general medicine; Dr. Arthur Van Harlingen, diseases of the skin; Dr. Edward L. Duer, diseases of women and children; Dr. John B. Roberts, Secretary. A general dispensary will be shortly organized in the central part of the city.

NEW CLINIC HALL FOR THE WOMAN'S HOSPITAL.—The ceremonies attending the formal opening of the new clinic hall of the Woman's Medical College were held on the 4th instant, in the presence of nearly three hundred contributors and invited guests. Professor Rachael L. Bodley, representing the board of managers, made an address of welcome, and Mrs. Rachel C. Bunting, treasurer for the board, gave with some detail the sta-

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tistics of the work of the hospital and college. Prof. Benjamin B. Wilson, representing the clinical staff, gave his views on clinical instruction for women, and Dr. Anita E. Tyng, physician in charge, reviewed, on behalf of the resident physicians, the work done in the hospital.

Bishop Simpson and Mrs. Caroline H. Dall, of Washington, spoke of the work being accomplished by the college. The new hall is of brick, two stories in height, with a high approach and an ornamented front. It stands on North College Avenue, between the hospital and the college, and faces the northern side of Girard College. The interior is finished in hard woods throughout. The greater part of the space is taken up with the amphitheatre and two stairways. The clinic demonstration room, in the centre of the amphitheatre, is admirably lighted by a large skylight and a row of windows in the north side of the building.

THE NATIONAL ASSOCIATION FOR THE PROTECTION OF THE INSANE will meet in this city in annual session January 25, 1883. The session will be held at the hall of the College of Physicians, the use of which has been tendered for the purpose. Interesting papers are promised from prominent members living in different parts of the country, and the meeting will, no doubt, be largely attended.

CONVENIENT METHODS OF PREPARING KOUMYSS.—Dr. Sakovich, in the *Vratch*, 1882, No. 12, highly recommends a method of preparing koumyss from cow's milk, as it was originally given by Dr. Toropoff. He takes half a champagne-bottle of morning unskimmed milk, and fills up the bottle with pure fountain-water. This mixture is triturated in a mortar with one gramme of best yeast, and again returned into the bottle, with the addition of two tablespoonfuls of finely-powdered sugar. During the first twenty-four hours the bottle is kept uncovered, at the temperature of 14° Réaum. (63.5° Fahr.), then it is hermetically corked and kept in a cold cellar for five days. On the sixth day the koumyss is ready for use, and presents then a white, creamy, slightly gaseous fluid of pleasant taste.—*London Medical Record.*

Koumyss can be easily prepared by any household in the country by the following formula of Dr. Wolf:

Take of grape-sugar half an ounce, and dissolve in four ounces of water; then in about two ounces of milk dissolve twenty grains of compressed yeast (nearly all grocers keep it), or two ounces of fresh brewer's yeast. Mix the two solutions in a large quart champagne-bottle, and fill with good cow's milk to within two inches of the top. Cork and wire; put in a cool place not over 50° F., shaking three times a day. At the end of three or four days the koumyss is ready, and will keep for a week.

Koumyss, made at home, as follows, costs about fifteen cents a quart: Fill a quart champagne-bottle up to the neck with pure milk; add two tablespoonfuls of white sugar, after dissolving the same in a little water over a hot fire; add also a quarter of a two-cent cake of compressed yeast; then tie the cork on the bottle securely, and shake the mixture well. Place in a room of the temperature of 50° to 95° Fahr. for six hours, and finally in the ice-box over night. Drink in such quantities as the stomach may require. It will be well to observe several important injunctions in preparing the koumyss, and they are:

1, To be sure that the milk is pure; 2, that the bottle is sound; 3, that the yeast is fresh; 4, to open the mixture in the morning with great care, on account of its effervescent properties; 5, not to drink it at all if there is any curdle or thickening part resembling cheese, as this indicates that the fermentation has been prolonged beyond the proper time. Make it as you need to use it. The virtue of koumyss is that it refreshes and stimulates, with no after-reaction from its effects.—*Medical Summary.*

AFTER a cruise of a few months in the South Pacific, a French man-of-war was recently found to have specimens of living corals growing upon her hull. The interesting discovery has thrown some light on the question of the rapidity of growth of corals. The evidence tends to show that the vessel, on passing a reef of the Gambier Islands, against which she rubbed, had picked up a young fungia, which adhered to the sheathing, and grew to a diameter of nine inches and a weight of two and one-half pounds in nine weeks.—*Exchange.*

MEDICAL EDUCATION IN THE UNITED STATES.—The Annual Report of the Commissioner of Education for the year 1880 has just been issued by the government, and from it we learn that during the last decade the number of medical institutions and of medical students in the United States has about doubled, and that the number of instructors has nearly trebled.

The number of "regular" schools is put down at 72, with 1131 instructors and 9976 students. The "eclectic" schools number 6, with 65 instructors and 833 students. The "homœopathic" schools number 12, with 188 instructors and 1220 students.—*Medical News.*

DEATH FROM PATENT MEDICINE.—A coroner's jury in England, after deciding that a fatal result from "soothing syrup" was death by misadventure, added the statement in their verdict that "some restriction should be placed on the sale of patent medicines which could be used as poisons." The *Lancet* remarks that it is unfortunate that the official interests of the Chancellor of the Exchequer and the health interests of the public are in conflict in this

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matter. This is a subject that might well be investigated by the National Board of Health or some of the State boards. It will not be necessary, however, to go to England for cases of death from the use of nostrums.

SURE CURE FOR CORNS.—A. C., who has tried it, is authority for the following: Take one-fourth cup of strong vinegar; crumb finely into it some bread; let stand half an hour, or until it softens into a good poultice; then apply on retiring at night. In the morning the soreness will be gone, and the corn can be picked out. If the corn is a very obstinate one, it may require two or more applications to effect a cure.—*Druggists' Circular.*

MEETING OF THE ACADEMY OF SURGERY.—The third annual meeting of the Philadelphia Academy of Surgery was held at the hall of the College of Physicians, January 8, 1883, the President, Prof. S. D. Gross, occupying the chair. In the evening Dr. William Hunt delivered the address, in which he especially considered Esmarch and Antisepsis. He gave an interesting, instructive, and entertaining lecture, after which a microscopic exhibition was held in the main meeting-room of the College, and the Mütter Museum was thrown open for the guests, among whom were a number of ladies.

THE *New York Medical Journal* appears in its issue of January 6 as a medical weekly. It seems to us the largest and handsomest journal of its class in America. It is published by D. Appleton & Co., but is edited anonymously.

"CHEMICALLY PURE" TOW.—Two French physicians purify tow so as to make it perfectly white, soft, very elastic, and readily absorbent. They use the method employed to make absorbent cotton. Tow is treated with caustic soda and bleached with hypochlorite of soda, removing the alkali by muriatic acid. —*London Pharm. Journ. and Trans.*

GERMAN APOTHECARIES.—Berlin, with a population of 1,122,385 in 1880, had but 69 apothecary-shops, or one to every 16,266 of the population. This does not, of course, include the drug-stores, which are not kept by licensed apothecaries, while many drugs are also sold in grocery-stores. In Germany, the number of apothecaries being limited by law, each receives a better support, and there is less competition than in this country.

In Leipsic there is one to 10,000 inhabitants; in Cologne, one to 7964; in Hanover, one to 8207; in Breslau, one to 12,423; in Stuttgart, one to 7151; and in Königsberg, one to 9438.— *The Druggist.*

MET ITS DESERTS.—The Holman Pad Company is said to be hopelessly bankrupt.

UNITED STATES PHARMACOPŒIA.

ADDITIONS.

Abstractum Aconiti.
" Belladonnæ.
" Conii.
" Digitalis.
" Hyoscyami.
" Ignatiæ.
" Jalapæ.
" Nucis Vomicæ.
" Podophylli.
" Senegæ.
" Valerianæ.
Acidum Aceticum Glaciale.
" Boricum.
" Hydrobromicum Dilutum.
" Oleicum.
" Phosphoricum.
" Salicylicum.
Æther Aceticus.
Aluminii Hydras.
Ammonii Phosphas.
Amyl Nitris.
Amylum Iodatum.
Antimonii Sulphidum Purificatum.
Apomorphinæ Hydrochloras.
Argenti Iodidum.
" Nitras Dilutus.
Arnicæ Radix.
Auri et Sodii Chloridum.
Benzinum.
Bismuthi Citras.
Bismuthi et Ammonii Citras.
Bryonia.
Caffeina.
Calcii Bromidum.
Calendula.
Calx Sulphurata.
Camphora Monobromata.
Carbonei Bisulphidum.
Caulophyllum.
Ceratum Camphoræ.
Charta Potassii Nitratis.
Chelidonium.
Chinoidinum.
Chrysarobinum.
Cinchonidinæ Sulphas.
Cinchonina.
Codeina.
Collodium Stypticum.
Cupri Acetas.
Decocta.
Elaterinum.
Elixir Aurantii.
Emplastrum Capsici.
" Ichthyocollæ.
Erythroxylon.
Eucalyptus.
Extractum Aconiti Fluidum.
" Aloes Aquosum.
" Arnicæ Radicis.
" Arnicæ Radicis Fluidum.
" Aromaticum Fluidum.
Extractum Aurantii Amari Fluidum.
" Brayeræ Fluidum.
" Calami Fluidum.
" Cannabis Indicæ Fluidum.
" Capsici Fluidum.
" Castaneæ Flu.
" Chiratæ Fluidum.
" Conii Alcoholicum (fr. fruit).
" Cypripedii Flu.
" Ergotæ.
" Erythroxyli Flu.
" Eucalypti Flu.
" Euonymi Flu.
" Eupatorii Flu.
" Frangulæ Flu.
" Glycyrrhizæ Purum.
" Grindeliæ Flu.
" Guaranæ Flu.
" Hamamelidis Fluidum.
" Iridis.
" Iridis Fluidum.
" Lactucarii Flu.
" Leptandræ.
" Leptandræ Flu.
" Lobeliæ Fluidum.
" Malti.
" Mezerei.
" Nucis Vomicæ Fluidum.
" Pilocarpi Flu.
" Podophylli Flu.
" Quassiæ Flu.
" Rhois Glabræ Fluidum.
" Rosæ Fluidum.
" Rumicis Flu.
" Sanguinariæ Flu.
" Scutellariæ Flu.
" Stramonii Flu.
" Tritici Fluidum.
" Viburni Fluidum.
" Xanthoxyli Flu.
Fel Bovis.
" Inspissatum.
" Purificatum.
Ferri Carbonas Saccharatus.
" Iodidum Saccharatum.
" Oxidum Hydratum cum Magnesia.
" Sulphas Præcipitatus.
" Valerianas.
Frangula.
Glyceritum Amyli.
" Vitelli.
Glycyrrhizinum Ammoniatum.
Grindelia.
Guarana.
Hamamelis.
Hyoscyaminæ Sulphas.

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Illicium.
Infusa.
Infusum Brayeræ.
" Cinchonæ.
" Sennæ Comp.
Linimentum Belladonnæ.
" Sinapis Comp.
Liquor Ferri Acetatis.
" Ferri et Quininæ Citratis.
" Pepsini.
" Sodii Silicatis.
Lithii Benzoas.
" Bromidum.
" Salicylas.
Magnesia Ponderosa.
Magnesii Citras Granulatus.
" Sulphis.
Maltum.
Menispermum.
Mistura Ferri et Ammonii Acetatis.
" Magnesiæ et Asafœtidæ.
" Rhei et Sodæ.
Mucilago Cydonii.
Oleatum Hydrargyri.
" Veratrinæ.
Oleum Adipis.
" Aurantii Corticis.
" Aurantii Florum.
" Coriandri.
" Eucalypti.
" Gossypii Seminis.
" Lavandulæ Florum.
" Myrciæ.
" Phosphoratum.
" Picis Liquidæ.
" Santali.
" Sinapis Volatile.
Opii Pulvis.
Opium Denarcotisatum.
Pepsinum Saccharatum.
Petrolatum.
Physostigminæ Salicylas.
Picrotoxinum.
Pilocarpinæ Hydrochloras.
Pilocarpus.
Pilulæ Aloes et Ferri.
" Phosphori.
Piperina.
Pulsatilla.
Pulvis Antimonialis.
" Cretæ Compositus.
" Glycyrrhizæ Comp.
" Morphinæ Comp.
Quillaia.
Quinidinæ Sulphas.
Quinina.
Quininæ Bisulphas.
" Hydrobromas.
" Hydrochloras.
Resina Copaibæ.
Rubus Idæus.
Salicinum.
Sapo Viridis.
Sodii Benzoas.
" Bisulphis.
" Bromidum.
" Chloras.
Sodii Iodidum.
" Pyrophosphas.
" Salicylas.
" Santoninas.
" Sulphocarbolas.
Spiritus Ætheris.
" Aurantii.
" Gaultheriæ.
" Odoratus.
Staphisagria.
Sumbul.
Suppositoria (in Ph. 1870 a chapter-heading).
Syrupus Acidi Hydriodici.
" Althææ.
" Calcii Lactophosphatis.
" Calcis.
" Ferri Bromidi.
" Ferri Quininæ et Strychninæ Phosphatum.
" Hypophosphitum.
" Hypophosphitum cum Ferro.
" Picis Liquidæ.
" Rubi Idæi.
" Sennæ.
Thuja.
Thymol.
Tinctura Arnicæ Radicis.
" Aurantii Dulcis.
" Bryoniæ.
" Calendulæ.
" Chiratæ.
" Cimicifugæ.
" Croci.
Tincturæ Herbarum Recentium.
Tinctura Ferri Acetatis.
" Gelsemii.
" Hydrastis.
" Ignatiæ.
" Ipecacuanhæ et Opii.
" Matico.
" Moschi.
" Physostigmatis.
" Pyrethri.
" Rhei Aromatica.
" " Dulcis.
" Saponis Viridis.
" Sumbul.
" Vanillæ.
Triticum.
Triturationes.
Trituratio Elaterini.
Trochisci Ammonii Chloridi.
" Catechu.
" Krameriæ.
" Sodii Santoninatis.
Unguentum Acidi Gallici.
" Chrysarobini.
" Diachylon.
" Iodoformi.
" Sulphuris Alkalinum.
Ustilago.
Viburnum.
Vinum Album.
Vinum Album Fortius.
" Aromaticum.
" Ferri Amarum.
" " Citratis.
" Rubrum.
Viola Tricolor.
Vitellus.
Zinci Bromidum.
" Iodidum.
" Phosphidum.

NOTES AND QUERIES.

VENESECTION.

To the Editor of the Philadelphia Medical Times:

In the *Medical Record* of December 23, 1882, there is a case reported on the "abstraction of blood from the right heart." I do not know whether I represent a large class of physicians who were horrified as I was while reading the article, but I cannot help expressing my own individual opinion, not for the sake of publicity, but to enter a protest against any such inhuman proceeding. I call it inhuman because the case was that of a *strong* German, *father of a healthy family*, who seemingly died for the want of a lancet in the *proper* place and of other *active medical* treatment.

Is the profession gradually dropping into a routine of experimental practice with their patients, caring little or nothing for human life? or are we to stand up to our godly calling and consider the value of life and in its relation to those depending upon it? Dangerous experiments in diseases so well known and comparatively easy to cure when we apply our duty "by assisting nature in its weak points to overcome them," are cruel, and should be condemned unanimously by the profession.

In support of my protest, and at the same time for an illustrative comparison, I would respectfully call the attention of the reader to an article on "Venesection" in the *Philadelphia Medical Times*, vol. vi. p. 367.

F. Lessing.

Philadelphia, January 1, 1883.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY FROM DECEMBER 23, 1882, TO JANUARY 6, 1883.

Perrin, Glover, Lieutenant-Colonel and Surgeon.—Granted leave of absence for one month from the 19th instant. S. O. 217, Department of Dakota, December 20, 1882.

Bill, Joseph H., Major and Surgeon.—Will report to the commanding officer, Fort Omaha, Nebraska, for duty. Paragraph 4, S. O. 134, Department of the Platte, December 21, 1882.

McKee, J. C., Surgeon.—To report on or before January 1, 1883, to the commanding officer, Fort Winfield Scott, California, for assignment to duty as post-surgeon. Paragraph 1, S. O. 197, Department of California, December 28, 1882.

Gorgas, W. C., Assistant-Surgeon.—Relieved from the temporary duty to which assigned under Paragraph 4, S. O. 137, Department of Texas, and will report to the commanding officer, Fort Brown, Texas. Paragraph 2, S. O. 140, Department of Texas, December 26, 1882.

Hopkins, William E., Assistant-Surgeon.—Granted leave of absence for two months, to commence January 1, 1883, with permission to apply for an extension of two months. Paragraph 1, S. O. 88, Military Division of the Atlantic, December 28, 1882.

Kilbourne, H. S., Captain and Assistant-Surgeon.—Granted leave of absence for one month, with permission to apply through headquarters, Military Division of the Missouri, for an extension of two months. S. O. 218, Department of Dakota, December 21, 1882.

Reed, Walter, Captain and Assistant-Surgeon.—Relieved from duty as attending surgeon, headquarters, Department of the Platte, and will report in person to the commanding officer, Fort Omaha, Nebraska, for duty. S. O. 134, Department of the Platte, December 21, 1882.

Turrill, H. S., Captain and Assistant-Surgeon.—Upon being relieved from duty at Fort Omaha, Nebraska, will proceed to Fort Fred. Steele, Wyoming, and report to the commanding officer of that post for duty thereat. Paragraph 5, S. O. 134, Department of the Platte, December 21, 1882.

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PHILADELPHIA, JANUARY 27, 1883.

ORIGINAL COMMUNICATIONS.

A CASE OF CHRONIC, LEFT-SIDED HEMIPLEGIA, WITH EMBOLISM OR THROMBOSIS OF THE RIGHT BRACHIAL ARTERY, OCCURRING IN THE PUERPERAL PERIOD—PARTIAL RECOVERY—WITH REMARKS.

Read before the Philadelphia County Medical Society, November 22, 1882,

BY EDWARD R. STONE, M.D.

AMONG the many diseases and accidents of pregnancy, those involving the brain in a destructive lesion are not commonly met with. The following case is of interest, therefore, as illustrating a rare complication, and also because it presented unmistakable signs of embolism in the arm, which have an important bearing upon the diagnosis of the cerebral disease:

Mrs. W., æt. 36. Health has always been good. Has never had syphilis or rheumatism. She has been pregnant five times. The first pregnancy resulted in a healthy infant at term, who is living. The second and third were miscarriages at the third or fourth month. In the fourth the fœtus was born at term, but died in less than a year, of teething and diarrhœa. The fifth pregnancy progressed naturally until about the middle of the fifth month, when she had symptoms of supposed asthma and bronchitis. These symptoms disappeared in about two weeks, and with them the movements of the fœtus ceased. Labor came on about ten days after she had no longer felt life.

I was called to attend early in the morning of April 3, 1882, and ascertained that the pains had continued since midnight, but had at this time ceased. On examination, a somewhat softened and macerated fœtus was found to have been expelled, except the head and shoulder. Some force was needed to disengage the head, as the neck was firmly held in the grasp of the cervix uteri. The placenta was found detached, and was removed without difficulty. Very little blood escaped. The placenta was firm and hard, and the uterine surface presented twelve or fifteen small clots embedded in the tissue, varying in size from buckshot to large peas. The first day after confinement was not marked by anything unusual, except a very scanty lochial discharge; but the patient felt very well. April 5, at about eleven A.M., she got up to urinate, and while sitting on the commode suddenly experienced a feeling of numbness in the right forearm and hand. She became very nervous and excited, crying out that "her arm was dead." The hand, after a few minutes, was found cyanosed and cool, and the radial pulse absent. Feeble pulsation was detected in the upper part of the brachial. She was put to bed, the arm and hand were wrapped in cotton and flannel, and an anodyne was administered. She soon slept. In about one hour and a half after the development of the symptoms in the arm, she awoke, when the nurse noticed a thickness of articulation and that the face was drawn to one side. The attendant had not been absent from the room, and she was positive that no convulsion or apoplectic seizure had occurred. The left side of the face was palsied; the tongue protruded to the left. The forehead-muscles and the eyelids were not affected, and the pupils were even and normal; the left upper extremity was quite helpless, while the left leg could be moved slightly. The patient was quiet, and answered questions perfectly, except that the words were not distinctly uttered. She complained of severe neuralgic pain and numbness in the right arm, but made no complaint of headache.

April 6.—The sensation in the left hand and foot was tested, and found to be defective, especially in the hand, the patient not being able to detect two points separated one half-inch on the palmar surface of the finger-tips, and even sometimes mistaking the finger touched. She had suffered much from the pain in the right hand, which was very severe in the thenar eminance. The surface was cool and dusky, the radial pulse still absent. Urine was passed naturally, but was concentrated and quite muddy. It deposited one-eighth albumen. The heart-sounds seemed quite normal. In the evening the temperature rose to 100°; pulse 100.

April 7.—Condition much the same, the fever continuing. Evening temperature 101°; pulse 70 and full. The kidneys were acting better, under the influence of diuretics. She was quite talkative, and rather foolish in her demonstrations of affection, etc., but there was no true delirium. The pain in the right hand continued troublesome.

April 8.—Power of motion in the left leg was slightly greater. Left arm continued quite helpless. Fever continued, with an evening temperature of 100⅘°; pulse 60. The urine was more plentiful, with the proportion of albumen diminishing. The pain in the right hand was still the most prominent symptom. The bowels, which had been confined, were freely moved by a mercurial cathartic.

A daily record of the symptoms is unnecessary, as the improvement was very gradual, but uninterrupted.

Slight fever of a continued type was noted until April 17, when the temperature became

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normal. At about the same time the urine became free from albumen, the deposit having steadily diminished day by day. The improvement, after two weeks, in the paralysis was very slight in the face and arm, but more marked in the leg, which was moved with some freedom. The right hand continued painful for more than a month, and was, indeed, the chief cause of complaint. There were signs of returning circulation through collateral vessels, the radial artery still remaining pulseless, and the hand decidedly cooler than the other.

After two months, the patient was able to walk about, but experienced some difficulty in stepping upward. The left arm could be moved a little at the shoulder and elbow, and some flexion could be made at the fingers. Sensation only slightly defective. Paralysis of face and tongue somewhat better. Right hand continued cool, but with fair circulation, as evidenced by the color and the movement of blood in the superficial veins. No radial pulse. Her general health was very good. There was marked acne rosacea on the nose, cheeks, and forehead. After six months, motion was good in the left leg. Left arm not much wasted. The deltoid muscle was weak, with impaired pronation and supination of the forearm. Power to grasp with the hand better, but still very defective. There is slight permanent contraction of the flexors of the fingers, and to a less degree of the toes also. The palsy of the face-muscles was not noticeable, except when she attempted to use them in laughing or talking. Tongue protruded somewhat to the left. The temperature of the right hand was decidedly below that of the other, and the radial pulse still absent. She no longer suffered, however, from the pain which was at first so annoying. The nails of the right hand showed transverse ridges, marking the period when their nutrition first began to suffer. Above this line the new nail was depressed and flattened. Her health was fair, the tongue clean, and digestion good. The eruption on the face had decidedly improved. Menstruation was regular, and the urine free from albumen. Auscultation revealed nothing abnormal in the heart. The sensation in the palsied hand had much improved, but was still slightly defective.

Remarks.—This case is one of great interest, and I have searched medical literature in vain for its counterpart. There is not much doubt that the asthmatic attack, which was the first symptom noticed, was connected with albuminuria. The latter condition, in all probability, was also a predisposing cause of the placental hemorrhages, which disturbed the circulation sufficiently to destroy the life of the fœtus.. The influence of albuminuria is well understood as a cause of hemorrhage, although the *rationale* of its action is not very clear. The chief interest in this case, however, has to do with the nature of the hemiplegia. The persistent chronic character of the paralysis will enable us to lay aside such alleged causes as hysteria and anæmia, the effect of which would be mild and transient. Uræmia has been urged as a cause of puerperal paralysis, and Cazeaux says "that Imbert-Gourbeyre feels no hesitation in saying that uræmia is the usual cause." This opinion is not generally held, however, except indirectly as a cause of hemorrhage. The symptoms in this case can only be explained by ascribing them to either hemorrhage or embolism, or possibly thrombosis, in the neighborhood of the right corpus striatum or motor tract. The position of the lesion can be asserted with some certainty, as the paralysis was chiefly of motion, affecting the left upper and left lower extremity, the muscles about the angle of the mouth and the nose, and the tongue on the same side, without materially disturbing the eyes or the forehead.

The sudden occurrence of hemiplegia, without the usual premonitory symptoms of hemorrhage, and without convulsions or apoplectic seizure, would seem to indicate embolism, as would also the age of the patient, hemorrhage of the brain being in the majority of cases a disease of advancing years and diseased blood-vessels. On the other hand, it is well known that the *left* middle cerebral artery is more commonly the seat of embolism than the right. This is readily explained by a reference to the direct origin of the left carotid from the arch of the aorta. For this reason also aphasia is dwelt upon as a symptom of the disease. There was undoubted albuminuria, a condition favorable to hemorrhage. The diagnosis of embolism must generally be considered very doubtful, if the origin of the supposed embolus cannot be demonstrated. Hence the importance of valvular disease of the heart, as the vast majority of the cases reported have had their origin in valvular excrescences or fibrinous deposits in the heart. (I refer to embolism of the systemic arteries, as the disease in the pulmonary artery usually is caused by a clot from phlebitis in the pelvis or extremities.) The case under consideration had no evidence of cardiac disease, and the heart was examined repeatedly and carefully. Although so many of the

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characteristics of cerebral embolism were absent, there was one feature that was significant. The undoubted sudden occlusion of the right brachial artery, followed in a short time by equally sudden hemiplegia, indicate an identical cause for both. Of course it would be possible for embolism to occur in the extremity and hemorrhage in the brain; but if the presence of the disease in the arm is admitted, the same lesion in the brain cannot be gainsaid for want of an evident source of the embolus.

That the presence of signs of cardiac disease is not always considered essential to a diagnosis of embolism, I would refer to Dr. A. Hughes Bennett,* who gives the histories of six cases, in five of which the heart was apparently normal. None of these cases, however, terminated fatally: so that proof is wanting of the healthy condition of the heart. His diagnosis was based upon the chronic character of the hemiplegia, the comparative youth of the patients, absence of premonitory symptoms, and limitation to the motor tract, and the absence of albuminuria, although, as several of these cases were not seen for some time after the inception of the disease, there may have been temporary albuminuria. It seems possible also for a coagulum to form in the heart or aorta without causing auscultatory signs. Thus, Roper† reports a fatal case of embolism of the right heart and pulmonary artery, due to fibrinous concretions, in which the heart-sounds were not affected. The question of primary thrombosis of the arteries at the seat of the lesions in the arm and brain is worthy of consideration; but that is a subject on which we have very little light at present, and there is still much to be investigated of the influence of pregnancy and the puerperal state upon the blood. It is understood, however, that in pregnancy the blood is relatively poor in corpuscles and rich in fibrin,—a condition which is favorable to coagulation. After a careful study of the clinical history of this case, I would venture the opinion that it was one of multiple embolism, in which the emboli were derived from some unknown point in the heart or aorta or one of thrombosis from a hyperinotic state of the blood; that the occlusion took place in the right middle cerebral artery, and to an extent not sufficient to prevent collateral circulation, the brain-substance in the neighborhood, therefore, escaping in great measure the grave secondary changes which result when the circulation is permanently checked.

Fordyce Barker‡ relates a case in many respects similar. The patient, a primipara, æt. 32, was suddenly seized with left hemiplegia during labor, without loss of consciousness or convulsions. There was also temporary albuminuria and some fever. She slowly recovered, and was able, after some weeks, to walk about, slight contraction remaining at the ankle-joint. Dr. Barker thought that only embolism could explain the symptoms, whereas if convulsions had occurred hemorrhage would have been indicated. Although the condition of the heart is not mentioned, it may be assumed from the history of the case that that was apparently healthy.

In the treatment of this case there was nothing unusual except the use of carbonate of ammonium, as recommended by Bartholow. The embolic arm was carefully protected by being well wrapped in cotton, and morphia was freely used to control the severe pain in the hand. The diet was fluid, and the circulation was relieved by diuretics and cathartics. Quinia and stimulants were used later in the illness. It will be well to remember that the symptoms developed suddenly after the patient had risen from bed, and there is little doubt that the exertion acted as an exciting cause. We should therefore heed the warning, and not allow patients lately confined to leave the bed, although the precaution may be unnecessary in many cases. Who can tell when, as in this case, a few minutes may change a case of apparently normal convalescence from childbirth, into a serious and dangerous disease? It also emphasizes the importance of ascertaining the condition of the kidneys, the function of which is so frequently disordered in pregnancy. An examination of the urine of this case would have given timely warning of danger, which might have prevented a tedious and perhaps incurable affection, to say nothing of the life of the fœtus, which was sacrificed on account of the diseased condition of the mother.

PHILADELPHIA, October 2, 1882.

* Clinical Lecture on Diseases of the Nervous System, British Medical Journal, 1881, vol. i. p. 261.

† Transactions of the London Obstetrical Society, vol. xxi. p. 74.

‡ Puerperal Disease, p. 27.

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THE USELESSNESS OF STYPTICS IN GENERAL SURGERY.

Read before the Philadelphia County Medical Society, November 22, 1882,

BY JOHN B. ROBERTS, M.D.

IF hemorrhage is sufficient to make its arrest by surgical means important, styptics are either worthless because inefficient, or needless because better hæmostatic measures are easily applicable. That which is inefficient and unnecessary is certainly useless. Hence styptics are useless for arresting hemorrhages met in general surgical practice.

By styptics I mean those astringent chemical agents that are employed to stop bleeding, because of their tendency to produce contraction of the vessels and surrounding tissues, and because of their effect in inducing rapid coagulation of blood. Their number is great. Subsulphate of iron, perchloride of iron, alum, tannic acid, gallic acid, turpentine, the copper, zinc, and silver salts, and combinations of various mineral and vegetable ingredients, have had their advocates. They are all about equally useless, though some are more objectionable than others.

The method of using styptics generally recommended is substantially as follows: "Remove loose clots, wipe the bleeding surface dry, and press upon the part a piece of cotton, muslin, or sponge impregnated with the styptic powder or solution." In many cases this will, I admit, be followed by cessation of bleeding; but so would mere exposure to the air, or the application of pressure without the styptic solution.

I have three objections to the use of styptics:

1 Their reputation as hæmostatic agents leads practitioners to resort to them when more trustworthy methods are needed. Thus valuable time is lost, for, after temporary arrest, the hemorrhage recurs in the already anæmic patient, and is perhaps followed by disastrous results.

2. If they fail to control the bleeding, —which they generally do if the hemorrhage is important,—it is often so difficult to rid the surface of the pasty clots that subsequent ligation of the vessels is well-nigh impracticable.

3. Many styptics prevent union by first intention, because they irritate the raw surface, lead to inflammation, or induce suppuration.

Monsel's salt—the subsulphate of iron—has probably more reputation than any other styptic, yet it is the most objectionable of all. It covers the wound with black, sticky clots, which obscure further examination of the surface, prevent primary union, and may even allow bleeding to occur beneath them. I have seen such leathery masses of coagulum raised up into vesicles by the subjacent hemorrhage.

There are but two scientific and satisfactory ways of arresting hemorrhage as usually observed in the practice of general surgery:

1. The first is occlusion of each individual vessel by ligation, torsion, or acupressure, and is generally not required for arteries smaller than the facial, nor for veins, except those of the largest calibre.

2. The second method is direct pressure by compresses and bandages, which, if properly applied, will always be effectual when the first method is not demanded. It is to be adopted when there is oozing from small arteries and capillaries.

In all cases of traumatic hemorrhage, it should be recollected that a man can lose many fluidounces of blood without serious injury, and also that no artery or vein can bleed if it is compressed by the fingers. These facts assure the surgeon that there are always time and means to control the bleeding at least temporarily.

Many arteries that spurt freely when first divided soon spontaneously stop bleeding. Therefore it is foolish to interrupt the steps of an operation by ligating every little vessel that throws out a jet of blood. Let the surgeon proceed, even if the arteries are quite large, and when he has finished his incisions he will find, to his surprise, very few points requiring ligatures. He should ligate these, and, after washing away the loose clots, make moderate and equable pressure. There will then be no part for styptics to play.

It is possible, perhaps, that there may be occasional instances of oozing where pressure cannot be effectually applied; but these are certainly so rare that they do not materially affect the truth of the proposition that styptics are useless. In bleeding from cavities, compressed sponge will often make efficient pressure; and with elastic bandages we can obtain sufficiently firm compression even of soft and flaccid parts. Of course bandages must not be applied tightly enough to strangulate and cause

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gangrene. Firm pressure is all that is necessary, for it requires only moderate digital pressure to occlude even the largest arterial trunk.

It would be well if the profession could be made to forget the very existence of styptics, for then every one would treat hemorrhage by the best methods, and the waters of Pagliari, Ruspini, and Brocchieri would deservedly cease to flow, and would soon sink as far from sight as their ancient inventors are buried. When the physician again treats ague with the bark jacket it will be time enough for the surgeon to treat hemorrhage with styptics.

THE ADULTERATION AND SUBSTITUTION OF DRUGS AS ELEMENTS OF UNCERTAINTY IN MEDICAL PRACTICE.

Read before the Philadelphia County Medical Society, December 13, 1882,

BY HENRY LEFFMANN, M.D.

GENTLEMEN,—My intention in presenting this paper is to place on record in a definite manner the result of some observations as to certain practices of pharmacists and dealers in drugs. Some of the points here given have been presented elsewhere, but not in a satisfactory form. Though the fact that adulteration existed in raw and prepared drugs has been long known, the more striking features of the present communication have been observed but recently. As much misunderstanding and some personal feeling have arisen out of the investigation, I will give a brief and, I believe, correct history of it.

Some time during last summer a gentleman connected with the editorial department of a city newspaper obtained the information that certain druggists in the city were in the habit of making substitutions in prescriptions calling for costly drugs. The informant was a pharmacist who officiated as relief clerk,—that is, served in different stores in place of clerks temporarily absent. In this manner he is said to have become familiar with the practice of seventeen Philadelphia stores. The information thus given of the shortcomings in these places was of a character eminently suited for the local columns of a daily paper, and it was accordingly published, with such adornment as is the custom of the city reporter and editor. The original publication of these charges has been ascribed by the pharmaceutical journals to the animus of the Medico-Legal Society of this city, and to the efforts of some younger practitioners of medicine to bring themselves into notice; but neither of these ascriptions is correct. The first articles originated within the management of the paper, and were published without any consultation with professional persons, and with no other motive than that of furnishing news. The articles attracted much attention. The Trade Association of Philadelphia Druggists considered them at one of their meetings, and—unwisely, I think—made a formal denial of the charges, and challenged the newspaper to produce proofs. The editor of the paper then engaged me to assist in the investigation, and, under my direction, prescriptions were written and medicines purchased. At a subsequent meeting of the Trade Association one of the members is reported as having alluded disparagingly to this method of "decoy" prescriptions; but I cannot see that any reasonable objection can be made to it. No honest druggist need fear a decoy prescription, and it is certainly one of the few methods by which dishonesty can be detected. The prescriptions and medicines obtained exhibited a rather alarming degree of incorrectness and fraud.

In addition to the results of this investigation I have learned much recently from the published reports of examination in other cities, and from conversation with manufacturing and retail druggists.

The abuses in question may be considered under three heads,—inferiority in the crude material; deficiency in quality or quantity of the articles used in prescriptions; direct substitution.

Every one is aware of the liability of powdered articles to adulteration, but few, perhaps, are aware how poor many powdered drugs are. I lately heard a gentleman who has had several years' experience in the wholesale trade say that in most cases the so-called *fresh* drugs were four or five years old. He detailed a case in which a quantity of a medicinal root, which had become so worm-eaten as to be unfit for sale in the whole condition, was ground up, and the powder was found to be of such unexpectedly light color that it was marked A 1,—that is, first-class,—and was sold as such. I have no doubt that this instance is

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but one of many similar occurrences in the wholesale drug-stores of this and other cities. The question, however, of the condition of crude articles belongs more to pharmacy than to medicine, and I pass it by.

The pharmaceutical preparations, tinctures, extracts, etc., made with inferior grades of crude materials will of course be inferior in character; but a more serious fraud exists in the practice of intentionally weakening preparations by the addition of diluents. Among the substances that are thus tampered with is laudanum. A feeling prevails among pharmacists that it is entirely proper to sell over the counter to general purchasers a tincture of opium from ten to fifty per cent. weaker than the official article. This custom is not limited to retailers: wholesale houses of reputation furnish a diluted article for the trade. The excuse for this practice is that persons who buy laudanum may be injured by it, and that dilution will render it less dangerous. I regard this as a mere pretext, not in any sense expressing the proper motive. The real reason is that laudanum is expensive, and that its strength may vary greatly without inexperienced persons suspecting it. The object is, therefore, to increase the profit. The new Pharmacopœia has increased the strength about fifty per cent., and we may expect to see laudanum sold even more adulterated than heretofore. Sweet spirit of nitre, paregoric, and tincture of iodine are also weakened. My examinations show much variation in quality in these preparations as obtained at different stores. Tincture of iodine may be prepared at a cost of about four cents per ounce, and, as it retails at prices not less than ten cents an ounce, the margin of profit may be supposed to be sufficiently large to insure a perfect quality. Not very highly skilled labor is needed, for the process in the old Pharmacopœia is as follows:

"Take of iodine one ounce, alcohol one ounce; dissolve the iodine in the alcohol."

A form of fraud probably very common, but often not to be detected without elaborate analysis, is the improper preparation of ready-made pills. Rumors of deficiency in even standard brands are occasionally heard; but I did not know of definite statements on this point until the publication recently of a report on adulteration in the State of New York. According to this, twenty-nine samples of quinine pills were examined, and in every case the amount of quinine sulphate was below that which the pill professed to contain. Two-grain pills were found to contain from 0.9 to 1.8 grains; three-grain pills contained from 1.7 to 2.8 grains; while five-grain pills contained from 2.4 to 4.7 grains.

Not only may the active ingredient of the pill be deficient in quantity, but it may also be deficient in quality or condition. Not much attention has been given to this matter by investigators. During the summer one of the members of the present class at Jefferson College has, under my supervision, made an examination of the standard pills, with a view to determine the quality and condition of the drugs contained in them. The result of these examinations is that substances are often put into pills in a crude condition; articles—such as arsenic or calomel—which should be in fine powder are often in coarse grains. Incidentally I may mention that some homœopathic triturations were examined, and found to be open to the same criticism.

Substitution of one drug by cheaper articles of analogous character is another fraud, and one which is more common than is generally supposed. From the results of analyses, and from facts detailed to me by druggists, I am forced to the conclusion that in more than one drug-store in this city it is a regular practice to substitute, partly or wholly, the cheaper alkaloids of bark for quinia. I have been told by well-informed druggists of one store where it is believed no quinia is kept on hand; of two other stores where the standing rule was to use quinia and cinchonidia in equal parts. I present a preparation as put up in an up-town store, in which no quinia was used, although the prescription called for four drachms of it.

Boric acid would seem to be too cheap and too distinct a body to allow of substitution; but a druggist in the northeast section of the city on two occasions put up borax instead,—in one case furnishing it in a moist condition, in the other as a dry powder mixed with tannin. I submit for the inspection of the members a sample of the latter.

Another case of substitution was that of eserine sulphate for eserine bromide.

In conclusion, I think these facts go to show that the time is approaching when

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regular practitioners will have to take more direct control over the condition of the medicines which they use. I have been for some time in favor of physicians dispensing their own medicines, believing that such a system will have many advantages, both to the profession and to the public. As this reform, however, will be of so radical a character that we cannot expect immediate agreement upon it, I think that it may be admitted that we ought to discourage all kinds of ready-made prescriptions, whether they present themselves under fanciful modifications of scientific terms or in the plainer form of bitters, prepared foods, compound syrups, etc. With the resources of modern pharmacy for concentrating drugs and concealing disagreeable taste, I think no necessity exists for encouraging the wholesale manufacture of pills and granules, which may lie for months or years in the store, becoming more or less insoluble and inert. The profits of the drug-trade are in all cases large enough to allow the best service by the apothecary; and when quinine, morphia, or similar article is to be given in pill form, no reason exists why the pill should not be made up by the prescription-clerk.

PELLETIÉRINE TANNATE AS A VERMIFUGE.

BY A. JUDSON GRAY, M.D.

MY first experience with pelletiérine tannate as a tæniafuge has been so satisfactory that I desire to communicate the facts in the case for the benefit of those who, like myself, may have had failures with the older methods of treatment.

After reading the article by Dr. Berenger-Feraud, an abridged translation of which was published in the *Times* for October 7, 1882, I procured a single dose,—one fluidounce of the solution,—at a cost of three dollars, from the American agents, Messrs. E. Fougera & Co., of New York.

The subject of my experiment was a strong, well-nourished man, 35 years of age, of good constitution and strictly temperate habits. He first saw evidences of the presence of a tape-worm five years ago. He had been subjected to four attempts to expel the parasite previous to the one of which I am speaking. The first was with turpentine, which, to use his own expression, "nearly killed him, but did not materially damage the worm," as only a few distal joints came away. The next three efforts were with pumpkin-seed, resulting in the passage of eight, twenty, and eighteen feet respectively, including a large part of the neck; but in neither instance was the head seen, nor is it probable that it passed away, for after a period varying from two to three months the offspring (not joints) of the worm were again seen. My patient selected November 19 for the trial of pelletiérine, and on the evening before took a light supper of bread and milk, and at bedtime used a large enema of warm water. On rising at nine o'clock the next morning, the full dose of the tæniafuge was taken in a glass of sweetened water, followed in a quarter of an hour by six of Wyeth's compound vegetable cathartic pills. An hour later a substantial breakfast was taken, and enjoyed as usual. At one o'clock P.M. occurred a single evacuation of the bowels over a vessel half full of warm water. The action was free and painless, and brought the worm much knotted and rolled upon itself, but *entire*. It was of the unarmed species, and measured twenty-four feet and six inches. Pelletiérine was found to be agreeable to take, and caused neither nausea, giddiness, nor other unpleasant symptom. Half an hour after taking it there was experienced for a few minutes slight exhilaration and a sensation of extreme lightness, the patient remarking that "he felt as if he weighed about three pounds." The whole process was simple, easy, and entirely satisfactory.

A large number of persons, of both sexes, all classes, and all ages, residing on our Western plains, are afflicted with tape-worm. My experience with the several methods of treatment coincides very nearly with that given by Dr. Berenger-Feraud, koosso alone having invariably given negative results, possibly because the samples used were inert. I have seen pumpkin-seed entirely successful in expelling the armed worm, but with the other species it is of doubtful utility, although, as Dr. Squibb says in No. 6 of his *Ephemeris*, the efficiency of this and all other means employed may depend to a great degree upon the position of the head of the worm.

I have before in this paper alluded to the *offspring* of the tape-worm. They are important because they are the first unmistakable indication of the presence of a worm in the intestines. Many writers

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allude to them as "joints," which is incorrect and misleading. The joints are dead when passed, while these offspring are very much alive, and will continue to move for many hours under favorable conditions. A perfect description of them may be found in Aitken's "Practice," and nowhere else within my knowledge. I have been able completely to verify Aitken's observations, and, furthermore, in several instances have seen these offspring in various stages of development attached to the segments of the parent worm.

A CASE OF RHEUMATIC TONSILLITIS.

BY G. E. DE SCHWEINITZ, M.D.

THE subject of the following sketch is one taken from the practice of Dr. W. A. Edwards, of this city, for whom I saw the patient a number of times, and by whose courteous permission I report the case.

M. B., aged 22, a large-framed Irish girl, of full, plethoric habit, after some exposure to cold and wet on Tuesday, December 26, 1882, began to complain, during the night, of a slight sore throat, and by the end of the following day had developed the symptoms of an ordinary pharyngitis. No improvement having taken place, on Thursday, the 28th, she began gargling her throat with a mixture of flowers of sulphur and water, which treatment was followed by no benefit to herself, but rather by an aggravation of the symptoms, and the appearance of a "rash," which rapidly spread over the body. Thinking she had developed scarlet fever, her friends, much alarmed, hurriedly summoned a physician living in the neighborhood, who quieted their fears, pronounced the malady non-contagious, and prescribed some simple febrifuge mixture. Thus much of the account I gleaned from her friends. As her symptoms steadily grew more aggravated, Dr. Edwards was sent for on Saturday night, and found the patient in the following condition. Her tonsils were enormously swollen, at least as far as could be determined by external palpation, inability on the part of the patient to open the mouth to any extent forbidding ocular inspection. A bright red erythematous blush covered almost the entire surface of the body, but was especially well marked upon the face, neck, and chest. The tongue, as far as could be seen, was swollen and covered with a thick brownish fur. The pulse was quick and irritable, the temperature 102° F., the respirations somewhat embarrassed, and cerebration slightly disturbed. All endeavors to reach the swollen tonsils with his finger having proved futile, Dr. Edwards prescribed the external application of counter-irritation, together with a resolvent ointment, and internally a mercurial purge, to be followed by a saline, intending to see the patient in the morning and continue any treatment which a further development of the symptoms indicated. Unfortunately, he was unable to attend to any professional business on the following day, and requested me to see the case and take charge until he could again visit her. Accordingly, on Sunday morning I saw the patient, and found her presenting all the symptoms just detailed, in a much more aggravated degree, except that the erythematous flush had wellnigh disappeared, a few traces only remaining on the neck and chest. The jaw was now set almost as firmly as in a case of trismus, it being possible only to force between the teeth the blades of a pair of scissors. The tongue was of a dirty-brown color, the pulse much excited, the temperature had risen to 104° F., and the disturbed intellection had deepened into delirium. In addition, the following new symptoms had developed themselves: pain in the deeper layers of the post-cervical muscles, increased by pressure and movement, tenderness with some slight swelling and redness of the left wrist-joint, and an intensely acid, sour-smelling sweat, which had been quite profuse during the previous night. These symptoms certainly justified the diagnosis of rheumatic tonsillitis, and accordingly ten grains of salicylate of soda every three hours were prescribed, together with an envelopment of the swollen joint in cotton batting and the continuance of the resolvent ointment. Thirty-six hours later, when the patient was again seen, a decided amelioration of every symptom had taken place; the pain in the back of the neck and joint had passed away, the tongue was moist and beginning to clean on the edges, the jaws could be opened with a fair degree of freedom, and the temperature had fallen almost to normal. She continued to improve, and at the end of two days was convalescing, when she imprudently left her room, insufficiently clad, and exposed herself to the cold air. That night her temperature again rose, and there was developed an ordinary case of slight rheumatic fever, several of the middle-sized joints being involved. A salicylate-of-soda treatment was again instituted, and under its use the patient made a speedy recovery. This relapse was unfortunate for the girl, but certainly was very interesting, confirming, it seems to me, the diagnosis of rheumatic tonsillitis.

The prevalence at this season of the year of all manner of throat-troubles is perhaps sufficient excuse for reporting a case of this nature; but, furthermore, if in these cases the inflammation of the tonsils is an invasion-symptom or the prodrome of an at-

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tack of rheumatic fever in the near future, and it be recognized as such, appropriate treatment, it seems to me, might ameliorate, if not absolutely prevent, a general attack of rheumatism. Certainly, any case of tonsillitis accompanied by unusually severe constitutional disturbance, pronounced post-cervical pain, and acid sweating, especially if any one of the middle-sized joints exhibited slight swelling and tenderness, should be viewed with suspicion and a rheumatic origin suspected. The rather extensive rash or redness of the skin can naturally be classed among the so-called symptomatic erythemas which occur in the course of certain systemic diseases; but it is interesting to note that this erythema followed the use of sulphur, and, if the statements of her friends are trustworthy, grew worse after each employment of the sulphur gargle. I know of no recorded instances in which sulphur has produced such an eruption by its internal administration or when used locally on the fauces, although, as is well known, its external application as a parasiticide or otherwise may be followed by an eczematous inflammation; but, at the same time, I know no reason why it should not produce such results, explicable, if by no other cause, at least by an idiosyncrasy on the part of the individual.

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URÆMIC PSYCHOSIS.

BY EDWARD T. BRUEN, M.D.,

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IN the *Deutsche Medizinal-Zeitung* of August 3, 1882, occurs an account of severe psychic disturbance complicating a uræmic attack in a case of chronic renal disease. The record appeared as a translation in the *Philadelphia Medical and Surgical Reporter* for November 4, 1882. A similar case came under my notice recently in the wards of the Philadelphia Hospital, and, as psychic disturbances during or following uræmic attacks are exceptionally interesting, the following case merits a brief notice.

The patient was a man, between 40 and 50 years of age. A physical examination coupled with his personal history established the diagnosis of interstitial nephritis of at least five years' standing. There was but slight dropsy, amounting to a moderate swelling in the eyelids and ankles. The characteristic cardiac and arterial lesions were moderately well marked. After a week's residence in the hospital under appropriate treatment, and during which time the symptoms were those commonly found in such cases, and without psychical disturbance, suddenly one morning, on waking, the patient appeared much confused. Within a few hours a state of intense excitement ensued, attended with wild hallucinations. The skin was bathed in sweat, the pupils immovable, neither dilated nor contracted; the pulse was slow, the respiration deep and only ten per minute. At times the mental state approached coma, but the psychical disturbances very soon returned. The urine was withdrawn by catheter, and was found of a dark-red color, very full of albumen. The above symptoms lasted three days. On the third, consciousness gradually returned, and reason asserted itself, but there was no recognition by the patient that anything unusual had happened. After the attack, the presence of albumen continued gradually lessening, and the patient left the hospital so far convalescent that his symptoms were those of a latent interstitial nephritis with albuminuria.

Naturally the question of diagnosis was most pressing, and—need I say?—most difficult. Alcoholism was negatived by the history of the case, as was also specific meningeal disease or the so-called cerebral rheumatism. The evidences of renal disease drawn from examination of the urine, the study of the heart, which was hypertrophied, the arterial system, which gave evidence of increased arterial tension through the pulse and accentuated second sound, all tended to support the uræmic genesis of the psychic disturbances. The especial symptom meriting our comment is the restlessness of the patient. It was the active delirium of typhus, or tendency thereto, rather than the coma, which made this case unique in the records of uræmia. The treatment pursued was commonplace,—cupping, wet and dry, over the lumbar region, the administration of purgatives, and the use of the fluid extract of jaborandi until free diaphoresis was secured. The use of jaborandi was not considered to be contra-indicated by the general sweating which accompanied the attack. Jaborandi probably stimulates the secretion of the skin by acting directly on the sweat-glands or the nerves presiding over their secretion. In this case the sweating prior to the use of jaborandi presumably came from the repletion of the cutaneous vessels. It therefore

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was a transudation, and could not liberate the products of retrograde tissue-change as positively as the sweating induced by the diaphoretic. This detailed allusion is important, because so many cases of uræmia occur when the skin is moist, although the usual description of a dry skin is the rule. The purging was undoubtedly a powerful element of the treatment, but, as observed at the outset, the interest nucleated itself around the diagnosis.

NOTES OF HOSPITAL PRACTICE.

PENNSYLVANIA HOSPITAL.

CLINIC OF JAMES H. HUTCHINSON, M.D., ONE OF THE ATTENDING PHYSICIANS TO THE HOSPITAL, PHYSICIAN TO THE CHILDREN'S HOSPITAL, PHILADELPHIA, ETC., NOVEMBER 29, 1882.

Reported by WILLIAM H. MORRISON, M.D.

ENDO-PERICARDITIS.

GENTLEMEN,—The first case which I shall bring before you to-day is one which has been in the hospital for some time.

Her history is as follows. "S. G., aged 22, a single woman, a domestic by occupation, was admitted on the 6th of the present month. She came to this country one year ago. Her previous history was good. She had had whooping-cough and measles. The menses began at fifteen, and have been regular since. She has been working at Mount Airy for some time. About the middle of last August she became overheated, and took cold. This was accompanied by pain in the abdomen, and headache. In a few days she had pain in the left side, extending into the arm. An eruption, resembling that of measles, came out over the face and body. She also had pain in the neck and difficulty in swallowing. About September 4 she first noticed dyspnœa and palpitation on exertion. She has gasping-spells at times. The menses were regular until the last time, when they were delayed two weeks. She has soreness across the chest, which is worse at night. The bowels are regular. She was compelled to give up work two weeks ago. On admission, the pain in the abdomen was not excessive. The temperature was 100°.

"November 16.—Complained of pain in the region of the heart. On auscultation there was heard a harsh systolic murmur, most distinct at the apex. The area of dulness was increased, especially in a longitudinal direction. She was ordered Basham's mixture, in doses of one-half an ounce, three times a day.

"November 20.—The pain and dulness seem to be diminished; the murmur is not so harsh, and is less distinct.

"November 27.—Still complains of pain in the præcordial region. The area of dulness is increased, and somewhat pyramidal in shape."

This is the history as we have been able to obtain it. The range of temperature you can see from these charts. As you perceive, it is similar to that of the young woman whom I showed you a short time ago, and in whom I diagnosed incipient phthisis. During the first two weeks it varied between 99° and 100°; later, the remissions have been greater, the morning temperature being from a degree to a degree and a half lower than the evening temperature. This morning the temperature is 2° above the normal. There is, then, a moderate amount of fever.

There was nothing in this patient's condition when admitted that, without a careful physical examination, would have led us to the real source of her trouble. The history which we then obtained was much less complete than that which you have heard read. It is often difficult to obtain a perfect history of the commencement of a disease, even when the patient desires to give the information. It is often necessary to question the patient repeatedly and ask the same question over and over, in different forms, in order to get at the real facts of the case. We have made up this history from the answers we have received on different occasions.

At first, the symptoms pointed towards typhoid fever; there was a little abdominal pain, headache, a little tendency to diarrhœa, and considerable prostration, but immediately after admission this diagnosis was found to be not tenable; the other symptoms of typhoid fever were not present, and symptoms which are not usual in typhoid fever presented themselves.

We therefore pursued the investigation still further. There had been at that time no symptoms pointing to the chest as the seat of the trouble, but on examining the chest I found a well-marked systolic murmur at the apex of the heart. This murmur was not purely blowing, but was rough and rasping in character. Percussion showed

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that the area of cardiac dulness was increased; it was increased in all its dimensions, but especially from above downwards. There was dulness from the second interspace on the left side downwards. At this time no apex-beat could be felt. The area of dulness was distinctly pyramidal in shape. This pyriform shape of the cardiac dulness in certain diseases is very important in diagnosis. I listened carefully to see if I could detect any friction-sound, but could hear none. I have examined her repeatedly since then, and at times have thought that the blowing murmur due to mitral regurgitation was somewhat rougher in the positions in which we should expect to find a friction-sound. I therefore think it not unlikely that this was due to slight friction; but this has never been positively established. Finding these physical signs, I of course had no difficulty in diagnosing endo-pericarditis,—that is, inflammation of the endocardium complicated by inflammation of the pericardium. The blowing murmur due to mitral regurgitation, which was caused by insufficiency of the valve, indicated the endocardial affection, while the pyriform dulness over the heart pointed to the pericardial trouble. The question might of course be asked, Did not this murmur indicate an old endocarditis? But we do not find that the history of cardiac disease is so distinct as to warrant this assumption. It is more probable that the endocarditis and pericarditis both occurred at the same time.

In regard to the cause of this disease it is very rare to have these affections occur idiopathically. Occasionally they do occur without obvious cause. They frequently come on in the rheumatic diathesis, and also in the later stages of kidney-disease, especially when it is of the cirrhotic form. They may, of course, result from traumatism, as from wounds in the region of the pericardium, or penetrating it, or from blows over the heart. At first sight there seemed to be no cause for this endo-pericarditis. Upon questioning her closely, however, I found that she had suffered from pains in different joints. These pains do not seem to have been severe, but they appear to have been characteristic of rheumatism. I therefore have no doubt that this endo-pericarditis has occurred in a rheumatic person. It is often impossible to make this connection out.

I recollect attending last year a case in my colleague's ward during his temporary absence from the city. The patient had double pleurisy and pericarditis, which seemed to be idiopathic. Some time later, however, when he had passed again under the care of my colleague, he had a well-marked attack of rheumatism. The pericarditis had simply preceded the other manifestations of the disease. I look upon this case as of that character.

As to the treatment of such cases, if I had seen her earlier I should probably have treated her precisely as a case of rheumatism. If I had a patient with well-marked endo-pericarditis and high fever, I should give salicylic acid or salicylate of soda in large doses; but the time for this had passed when the patient was brought to the hospital. The temperature has never been excessive; it has never been above 100.2°. The amount of the pericardial effusion seemed to require that some means should be taken to reduce it. I gave for this purpose Basham's mixture. This preparation you will find useful in many different conditions. It is both a tonic and a diuretic. It was given in the present case in doses of one-half ounce three or four times a day, but it may be given in much larger amounts. It consists, as you are probably aware, of the tincture of chloride of iron, dilute acetic acid, and spirit of Mindererus. The following proportions may be used:

℞ Tincturæ ferri chloridi,
Acidi acetici dil., āā f℥j;
Liquor. ammonii acetatis, q. s. ut
ft. f℥vj. M.

Signa.—Dose, a tablespoonful every two or three hours.

The iron and dilute acetic acid may be increased to a drachm and a half in the six ounces, and if you wish to make it more pleasant to the taste you may add curaçoa cordial, or syrup of ginger, or something of that kind.

There was no occasion for digitalis in this patient. Usually there is excessive action of the heart. Under such circumstances the tincture—or, perhaps better, the infusion—of digitalis answers a good purpose. The pulse in this patient has varied between 70 and 80 per minute, and sometimes it has been as low as 68.

I need not tell you that the amount of effusion did not warrant surgical interference. It would have been bad surgery to

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have attempted the withdrawal of the small quantity of fluid here present. The operation of tapping the pericardium, while of great service in some cases, is one that should be used only when other means have failed.

In regard to the prognosis, it is favorable as far as the life of the patient is concerned. There is no question, I think, that this patient will recover a certain degree of health; but I do not think she will ever be the same as before the occurrence of the cardiac trouble. There is a certain amount of insufficiency of the mitral valve which will probably be permanent, and a certain amount of roughening will remain. The patient will recover with a damaged organ, but by exercising care she may be able to lead a useful life.

PARALYSIS, PROBABLY OF AN HYSTERICAL NATURE.

This patient has been in the hospital for a short time only, and I have not yet arrived at a positive conclusion as to the nature of the paralysis from which she is suffering.

This is the history. "S. L., aged 22, has always had good health until ten months ago, when, during a fit of anger, she suddenly became unconscious at the moment of seizure. Her face became discolored, and there were convulsive movements on the left side. She has only a partial recollection of the following three weeks, but has been told that she was stupid during that time. At first the whole left side lost power, but sensation has not, to her knowledge, been impaired. For some weeks the sight of the left eye was impaired, but now she is aware of no difference in the sight of the two eyes. Ten weeks after the seizure, she gave birth to a healthy full-grown fœtus. After the confinement the patient began to improve more rapidly. On admission, the patient was unable to wink the left eye alone; otherwise the face is not affected. Vision is the same in both eyes. The movements of the left shoulder are not impaired; those of the arm are slightly affected. At the elbow flexion and supination can be performed with less power than on the other side, and extension and supination cannot be made to the full extent. The flexors of the wrist and fingers are also affected. There is a slight amount of power in the extensors of the wrist, but the extensors of the fingers are almost completely paralyzed and contracted. The ability to make all these movements of the arm is variable. The lower extremities are not affected. Sensation is nowhere impaired. Examination of the urine gives negative results. The first sound of the heart is somewhat impaired, but there is no actual murmur."

She is, as you see, rather delicate and not well nourished. You observe the condition of the left hand. The fingers are clawed; she is unable to extend them, and when I attempt to straighten them I meet with considerable resistance. There is some contraction of the flexors of the fingers, and there appears to be slight contraction of the flexors of the wrist. When the hand is flexed, the fingers can be extended with less difficulty. This observation is often made in cases of organic disease. She says that she has no power to open the hand. She states that at first the same condition of flexion and paralysis was present in the lower extremities, but this has entirely disappeared.

These unusual symptoms came on, according to her account, during a fit of anger, and were attended by convulsive movements. The attack may have been due to a slight effusion of blood into some portion of the brain, as, for instance, the optic thalamus; or it may denote some hysterical condition. If it were due to hysteria, we should hardly expect so much contraction as is here present: at the same time, you see that there is a certain amount of paralysis of the face. This, she tells us, was much more developed at the time of the seizure. She was then not able to move the face at all, and the tongue was protruded to the left side. There is still a certain amount of paralysis of the orbicularis on the left side. I find it difficult to say to which of the two conditions that I have mentioned the trouble is due. I find, upon watching the patient, that there is a little more movement than she is willing to admit. I thought yesterday that the paralysis was not so great; but when I spoke of it to the resident she suddenly lost power. This is in favor of hysteria.

It is impossible to say at present which condition is the real cause. I shall have her carefully watched. Whatever may be the condition present, I think that she demands a tonic. I shall place her upon the use of iron in large doses, probably in the form of the carbonate, commonly called

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Vallet's mass, five grains three or four times a day. In view of the fact that there may possibly be a slight hemorrhage into the brain, I think it will be better to give her also iodide of potassium, in ten-grain doses, three times a day.

CIRRHOSIS OF THE KIDNEY.

This patient is a very interesting one in many respects. Her history reads as follows. "E. S., aged 52; admitted to the house on October 24. Was an inmate of the hospital fifteen years ago, suffering from suppurative pleurisy of the right side. She was tapped, and the discharge continued for three weeks. Five years ago she contracted articular rheumatism, which was followed by cardiac symptoms lasting for two years. She has not menstruated for five years. Three years ago she had a miscarriage: she is sure of this. The child-bearing period has, then, been continued longer than usual. Altogether, she has had three miscarriages. She has one child living and healthy, aged five years, who was also born after the usual menstrual period had passed. On admission, she was weak, hardly able to walk; the tongue was furred; she had pain in the epigastrium, some tympanites; lungs healthy. The heart was enlarged: the apex-beat is felt in the seventh intercostal space, the second sound is accentuated and best heard over the aortic cartilage. The urine contains considerable albumen, and is increased in amount. She has but little control over the bladder.

I shall now show you that the urine contains albumen. As you observe, it is light in color and has a tendency to throw down a slight deposit. This may be mucus or phosphates. It is difficult to say, from the appearance, upon what this depends. To a small quantity of urine in the test-tube I add, carefully, nitric acid, and at once there is the characteristic precipitate due to the presence of albumen. This appears at the junction of the two liquids, and has a sharply-cut border, both above and below. Nitric acid may also throw down a precipitate of uric acid. This occurs above the junction of the two liquids, and its borders are not sharply defined, especially the upper border. This test is not sufficient of itself. We therefore boil the urine, and at once obtain a precipitate, which occupies about one-fourth of the bulk of the liquid. By itself this last test is not reliable, for it may throw down the phosphates; but when we obtain a precipitate both by heat and by nitric acid the presumption is that it is due to albumen. The examination of the urine is not complete unless we test for more than albumen. It should be tested for sugar, although there is no probability that it will be found in the present case. The specific gravity should be taken, to see what kind of work the kidney is doing; and its reaction should be observed. It is also necessary to examine it microscopically. There are certain bodies seen under the microscope which will give important indications of kidney-disease. I refer, of course, to tube-casts. This urine has been examined repeatedly, but we have not been able to find any well-marked casts. This is not uncommon where a large amount of urine is passed. For the examination for casts it should be specially treated: it should be placed in a conical glass of some size and allowed to settle. It is not often that we are unable to find these casts in cases of well-marked kidney-disease.

As I have stated, this patient had, fifteen years ago, suppurative pleuritis,—that is, empyema,—which required tapping. She recovered, however, quite rapidly. There is some impairment of resonance on the right side, and some harshness of respiration, and some evidence that the lung has not fully expanded, but there is no apparent falling in of the side. I allude to this because the suppurative disease may possibly have had something to do with the kidney-disease. In certain forms of kidney-disease known as albuminoid or amyloid degeneration of the kidney, we generally find a history of suppurative disease of some kind. In this woman the suppuration does not seem to have been excessive, nor do the kidney-symptoms seem to have appeared soon after the empyema. I am inclined to think that the renal trouble has little, if any, connection with the previous disease. In addition, the condition of the patient, her advanced age, the great amount of water that is passed, and the absence of dropsy of the extremities, except when the patient is in an erect position, point to cirrhosis of the kidney. Cirrhosis is due to an excessive development of the connective tissue, which eventually causes contraction of the organ and impairment of function. This disease is indicated by the large amount of urine containing albumen, and by the absence of tube-casts. It is also indicated by

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the condition of the heart, which is slightly hypertrophied, and by the condition of the radial arteries, which have unquestionably undergone atheromatous degeneration. The accentuation of the second sound of the heart is also frequently present in cirrhosis. Under these circumstances I think the diagnosis of cirrhosis of the kidney is the correct one. It is possible that there is with the cirrhosis some fatty degeneration; but if this were so we should expect to find some fatty casts.

The treatment demands attention. Here, as in the previous case, Basham's mixture will be a useful prescription. We need a diuretic and a tonic. I shall therefore place her on Basham's mixture, in doses of half an ounce three times a day. It is of course necessary that the general health be maintained: she will therefore be ordered a nutritious diet. Her anæmia and great prostration would seem to indicate a nutrient. Cod-liver oil, if she could bear it, would be of service; but, on account of the irritability of her stomach, I am afraid that she could not retain it, and that it would do more harm than good. I have ordered a moderate amount of stimulant, and, as the kidneys are affected, I give it in the form of gin.

OBSCURE ABDOMINAL TUMOR, PROBABLY A FLOATING KIDNEY.

The next case is unusual on account of the age of the patient in whom the trouble occurs. She is stated to be 85 years old, but does not present the appearance of being so old. She was transferred to me as a case of cancer of the stomach. There is unquestionably a tumor in the epigastric region, but from very careful examinations I have not been able to satisfy myself that this is really the condition present.

I shall read her history. "L. P., born in Brooklyn. Family history, negative; had ague twenty-five years ago; had neuralgia in the head before the war. Twenty-two years ago the feet were frost-bitten and required amputation. Has had nightly micturition on one or two occasions since childhood: the urine is heavy and offensive, and sometimes scalding. Last winter she had a cough, but no vomiting. Has had headache for several years. The bowels were regular until last Christmas. She has had dyspnœa and nausea at intervals for a year. On admission, she had pain over the region of the kidneys at times, but not at present. There is a loud, harsh systolic murmur heard at the apex of the heart. A tumor is felt in the epigastrium to the left of the median line; it is roughly circular in shape and about one and a half inches in diameter; tender on pressure. There is some impulse in the tumor. The treatment consisted in the administration of

Morphiæ sulphatis, gr. $\frac{1}{16}$;
Spiritus chloroformi, ℥ijss;
Tincturæ cardamomi, f℥j.

Given every two hours.

"October 22.—No vomiting for three days. No pain upon pressure.

"November 1.—She was transferred to me.

"November 5.—Purged with pulv. jalapæ comp. Large fecal accumulations.

"November 6.—The tumor was found situated under the arch of the ribs, about midway between the umbilicus and the ensiform cartilage. It descends with the diaphragm. There is transmitted impulse. It is somewhat painful on pressure. No murmur on auscultation.

"November 9.—No tumor can be distinctly felt in any position.

"November 10.—Tumor lower and more distinct.

"November 11.—A large offensive stool, very black in color.

"November 13.—Tumor larger and lower down in the line of the colon, and perfectly movable.

"November 14.—No stool; ordered more jalap. Tumor tender at one spot.

"November 15.—Large bowel-movement.

"November 16.—Tumor movable and distinct.

"November 17.—Tumor examined under ether.

"November 18.—Percussion over the region of the kidneys gives dulness on the left side and high-pitched resonance on the right side.

"November 20.—Ordered an injection. Had free bowel-movements and vomiting at the same time.

"November 27.—Same treatment and result.

"November 28.—No tumor can be felt. Percussion over the renal regions gives the same result as was previously obtained."

There are several embarrassing circumstances connected with this case. After she came under my care there was very

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little vomiting. This appears to have been a prominent symptom before admission, and led to the diagnosis of cancer of the stomach. The tumor, as I have already mentioned, was found under the arch of the ribs, midway between the umbilicus and the ensiform cartilage. But it is found in different positions at different examinations. It is exceedingly movable. Indeed, it is so movable that it seems to me almost impossible to explain it on the supposition of cancer of the stomach. As the tumor is now placed, there is distinct transmission of impulse to it from the aorta. The impulse is simply transmitted from the vessel beneath; there is no expansile movement to the mass. When it is not lying in this position there is but little impulse, and sometimes it is not apparent. Placing the stethoscope over the tumor while in this position, I hear a systolic murmur, due to pressure of the mass upon the aorta. I can increase the harshness of this murmur by making greater pressure.

As I have stated, I have been somewhat puzzled to decide as to the exact character of this tumor. I think that it is too movable, and is not accompanied by sufficient vomiting, to make the diagnosis of cancer of the stomach at all probable. She has vomited but twice during the past month, and on at least one of these occasions the vomiting was due to the purgative taken. I at first thought that it might be connected with the left lobe of the liver, but this was found not to be the case as soon as I saw that it could be moved so freely. On several occasions I have given her purgatives in large doses. These have produced large stools containing many fecal masses which had evidently been retained in the colon for some time. The question therefore arises, Could not this tumor be due to fecal accumulation? Although this condition often gives rise to the symptoms of tumor, I do not think that it is the cause of them in the present case. The very movability is against it; and I have found that after large purgative doses the tumor, instead of being lower down, is often farther to the right. It also persists after the action of the purgative. It is occasionally a little tender, and it is very hard. I can make no impression on it with my finger, which we are always able to do in the case of fecal tumors. Consequently, I think that we must dismiss from consideration the diagnosis of fecal accumulation.

It might be an omental tumor. These tumors are often quite movable. But, owing to the advanced age of the patient, and to the absence of any marked prostration, I am not disposed to accept this as the correct diagnosis.

One of the gentlemen who were examining this mass suggested that it might be a floating kidney. Turning the patient upon her face, we percussed over the region of the kidneys, and we found that, while on the left side there was dulness, there was resonance on the other. It is, therefore, possible that this is a floating kidney. I think that this is probably the correct diagnosis: at the same time, I am not able to make it positively. In those cases of floating kidney which I have seen, I have been able, to a certain extent at least, to trace the outlines of the kidney, and in some instances feel the hilus of the organ. This mass is not exactly of the form of the kidney. I have not been able to distinguish the hilus, and it seems to have a nodulated surface. But, taking all the circumstances into consideration, I incline to the diagnosis of movable kidney. As the patient will probably remain in the hospital for some time, you will perhaps have another opportunity of seeing her.

TRANSLATIONS.

TRANSMISSION OF VIRULENT DISEASES FROM THE MOTHER TO THE FŒTUS.—The experiments of MM. Strauss and Chamberland (*Transactions de la Société de Biologie, Paris*) promise to be of considerable value. As our intimate knowledge of human pathogenesis must generally be the result of analogy, and only receive its substantiation from occasional clinical opportunities, these experimenters have commenced their researches on the lower animals. The report of the first series details the question of the transmission of those diseases the cause of which has been proved to be a microbe or bacteride.

They find that in anthrax neither the tissues nor blood of the fœtus nor the amniotic fluid contain any trace of the bacteria. The passage of the bacillus through the placenta cannot take place at any time of the pregnancy. The mothers were enabled to live for several (four to eight) days, instead of only thirty-six hours,

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by the employment of an attenuated virus. Microscopic sections of the placenta and its attachment, colored with gentian violet, showed a large accumulation of the parasites on the maternal side of the placental epithelium, whilst the fœtal side was entirely free from them.

These experiments also prove that the relatively great size and complete immobility of the anthrax microbe often cause its accumulation in the smallest capillaries, and absolutely prevent its transit through the glandular epithelium of the special organs, so that its presence in the bile, urine, and milk can only be due to an accidental hemorrhage, whilst the ăerobic quality of the bacillus forbids its entrance into the tissues.

This disease, then, offers an exception among the virulent diseases, as is shown by the other experiments.

The bacillus of symptomatic anthrax can, on the contrary, pass by the placenta and confer immunity upon the fœtus, and, as is already known, freely penetrates the tissues.

Chicken Cholera.—In the experiments on the rabbit, all the tissues and the products of secretion were found impregnated. The vesicles of Graaf proved as virulent as the blood. Owing to the season of the year in which these experiments were undertaken, enough impregnated fowls could not be obtained to determine with certainty if the eggs were also virulent when passing by the oviduct.

Septicæmia.—The septic vibrion of Pasteur was chosen for these inoculations: these pass the placenta less readily than the virus of the two former.

Though the microbes of anthrax cannot pass from the mother to the fœtus, the reverse transmission was clearly demonstrated. With a capillary trocar, virus was injected into the fœtus of guinea-pigs, which are easily accessible, and after the short period required for the propagation and increase of the microbes the mother in every case became affected. The autopsy then showed the curious anomaly of a virulent mother and one virulent fœtus while all the other fœtus were healthy.

Perhaps the future perfection of these studies will aid in solving the theory, which has been so much discussed, of the syphilitic infection of the mother without direct inoculation.

PHENOMENA OF DEATH BY COLD.—MM. Ch. Richet and P. Rondeau (*Transactions de l'Académie des Sciences, Paris*) find that plunging an animal into cold water is inadvisable for experimentation, as the impression made upon the skin by the water excites the nerves of sensibility and produces a tetanus which does not occur with dry cold. The resistance of dogs to cold is too great to employ them with advantage. They employ shaved rabbits, around which are coiled flexible tubes; in these a current of salt water —7° C. is turned, and by this means the temperature of the animal is lowered rapidly. In two hours the temperature is reduced from 38° C. to 18° C.

When the temperature reaches 25° C., the respiration commences to be ineffective: the rhythm is not, however, altered; the fulness of inspiration is merely diminished. The inspirations are still sufficient for life, and a rabbit whose temperature had been reduced to 17.7° C. recovered, when again warmed, without the aid of artificial respiration.

When the temperature is reduced below 17° C., the functions of the nervous system are seriously diminished, but not abolished. Reflex movements remained in several cases with a reduction of temperature to 15°, 14.2°, and 13.8° C. The excitability probably disappears not because the nervous system is chilled, but because the circulation in its tissues is stopped. The spontaneous movements disappear before the reflex; the reflex movements of the cornea before those of the members. At a temperature of 16° C. the reflex movements are remarkably slow, entirely analogous to those of the cold-blooded animals. The sense of pain is not lost at this temperature.

From the beginning cold has the effect of diminishing the number of the heart-beats. In the rabbit the pulsations at 23° C. are still about 80 per minute, but at 17° C. are reduced to 10 or 12. Here the manner of contraction of the heart resembles that of the turtle: the systole commences with the auricles, and by a vermiform movement extends to the ventricles.

The apparent state of death, characterized by all its signs, can last a half-hour (thirty-one, twenty, eighteen minutes).

For practical medicine this is important, as it indicates that human beings

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who have been frozen and no longer present the signs of life may still be resuscitated by external warmth and artificial respiration.

Therefore the respiratory and cardiac functions can be suspended for half an hour without death being a necessary consequence. A rabbit chilled to 19.3° C., whose heart still beat, though slowly, was not asphyxiated by a complete obliteration of the trachea which was continued for ten minutes; the same animal, again warmed to 32°, was asphyxiated in four minutes.

Thus the non-hibernating animals present the same phenomena when they are frozen as the hibernating. The lowering of the temperature retards the chemical phenomena, and consequently diminishes the irritability and all vital phenomena.

ABSCESS OF THE LIVER AS A SEQUEL OF TYPHOID.—A case illustrating this rare accident, in a boy 12 years of age, is reported (in the *Berlin. Klinische Wochenschrift*) from the Strasburg Kinderklinik of Prof. Kohls. The case was one of marked type, with considerable fever and diarrhœa, but without albuminuria. In the fourth week (twenty-seventh day) there was a chill and high fever; two days later a tumor and tenderness were noticed in the hepatic region; increase in percussion-dulness, and chills, indicated suppuration in the liver. The patient died in collapse on the thirty-sixth day. There had been no jaundice. Autopsy showed great enlargement of the liver, and on section numerous collections of pus were seen, which were subsequently observed to be located in the dilator canals for the portal vein, the intima showing purulent shreds upon its surface, which were uneven. The same state of affairs existed in the portal vein itself,—*i.e.*, distention, with comparatively thick pus; and upon slitting up the ramifications they were observed extending into the multiple abscesses mentioned above. In a few hepatic veins there were some adherent thrombi, and the intima of the vena cava showed a rough place upon its surface as large as a bean. The lymphatics extending from the right iliac fossa were also suppurating, and one of the mesenteric veins showed a purulent thrombus. The appearances in the intestines were not unusual. Peyer's glands were swollen and pigmented, and a few submucous extravasations were found in the ileum.

The treatment had been principally by antipyretic methods,—at the first lukewarm baths, and subsequently, as soon as the morning temperature began to fall, by full doses of quinine and salicylic acid.

A similar case, with recovery, was reported by Sidlo (*Militärärtzt*, 1875, No. 23). It was that of a girl, 10 years of age, who was taken sick with a high fever, headache, constipation, meteorism, ileo-cæcal gurgling, and enlarged spleen. On the fifteenth day of sickness there was complete apyrexia; but two days later fever again appeared, which during the next two days reached 40° C. (104½° Fahr.), with watery stools, meteorism, delirium, roseolous eruption, and again splenic enlargement. On the thirtieth day the temperature of the child was again normal. On the thirty-second day she had a chill lasting an hour and a half, with great pain in the side of the breast, and, after repeated chills, there was also pain in the hepatic region. Three days later, the fever continuing, the liver was enlarged, and jaundice appeared. From this day on there was rapid increase in the area of hepatic dulness, and on the forty-third day the lower border of the liver extended below the line of the navel; there was also an increase in the spleen, and collateral circulation in the superficial epigastric veins. The next day there were repeated chills, and abscesses developed under both mastoid processes, on the right side of the forehead, and the left temple, and later an immense collection of pus formed over the fifth and sixth ribs, which in a short time filled the entire right axilla. Great emaciation was noticed. The thoracic swelling began to diminish on the eightieth day, and in five or six days had disappeared. On the eighty-fourth day there was a sudden attack of pain in the abdomen, with chill, Hippocratic countenance, discharge of bloody purulent masses in the stools. Twenty-five of such passages occurred the next day, and ten at night, and on the following day twenty. From this on, there was rapid improvement, the liver-dulness quickly diminished, and icterus and collateral circulation disappeared. On the one hundred and twentieth day the child had completely recovered. In this case the purulent collection may have been external to the liver.

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PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, JANUARY 27, 1883.

EDITORIAL.

THE UNITED STATES PHARMACOPŒIA.

No. 4.

A VERY important new preparation, whose name will probably convey to most of our readers no idea of its use or value, is Ferri Oxidum Hydratum cum Magnesia. Much better would it have been for the committee to have adopted the name of the German Pharmacopœia instead of this hopelessly ponderous appellation: "Antidotum Arsenici" conveys a very definite idea, and is brief. The new antidote is without doubt superior to the old hydrated sesquioxide of iron; indeed, it is merely the old friend in a new and improved garb. Magnesia added to a solution of a sesqui-salt of iron precipitates the sesquioxide; the excess of magnesia is not irritant, like ammonia or potash, and has the further advantage of adding to the efficiency of the antidote. In a case of arsenical poisoning agitate magnesia in excess with the tincture of the chloride of iron, or with any of the sesqui-iron-solutions, pour off the liquid, and administer the bulky precipitate freely,—the work of a moment, at a time when seconds well tended will yield, it may be, years of life.

Glycyrrhizinum Ammoniatum is a concentrated, very elegant substitute for liquorice, occurring in brownish-red scales, freely soluble in water and in alcohol, and having a very sweet taste. As an addition to mixtures having neither an acid nor an alkaline reaction, and as a means of disguising the taste of quinine in powder, this new preparation seems to have a very decided field for usefulness. Five grains of it may be given at a dose.

Mistura Ferri et Ammonii Acetatis is Basham's mixture, which may now be ordered as officinal. Unfortunately, there is a serious error in the officinal formula, which, to our thinking, the apothecary is well justified in correcting. The formula seems to be based upon that of the German Pharmacopœia; but in the transfer the proportionate amount of acetic ether has been very much increased. It is well known that this ether is absorbed with difficulty, and when in sufficient amount is very apt to disturb the stomach and give rise to unpleasant eructations. There seems to be enough of the ether in the new Basham's mixture to embarrass seriously the gastric functions. The evil is certainly not lessened by the facts that the ether seems to be of no value in the preparation, and that the cases to which the remedy is applicable are usually already suffering from digestive disorders.

The Granulated Citrate of Magnesia appears to us to be a very good preparation, and from its greater convenience and uniformity it ought in a great measure to replace not only the old solution, but various proprietary aperients. The officinal title is Magnesii Citras Granulatus, and the dose a teaspoonful to a tablespoonful.

Compound Liquorice Powder, a most useful drug, is for the first time recognized by the United States Pharmacopœia. Sapo Viridis and its tincture also represent a class of important preparations introduced from abroad, which have found favor, but are now first officially naturalized.

Spiritus Odoratus is cologne. The introduction of perfumery receipts into the national Codex is a practice which ought to have been strangled in its conception.

In taking leave of the Pharmacopœia, it seems proper for us to answer an inquiry which is made by a correspondent (see "Notes and Queries"), and which we doubt not has arisen in the minds of most of our readers,—What are we to do about it? We agree with the general sen-

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timent that the Pharmacopœia Committee have been injudicious,—that they have often sacrificed practical utility to an imaginary scientific ideal; but one evil cannot rectify another, and to refuse to obey will only bring chaos. We are informed that the Baltimore pharmacists recently held a meeting in which, after talk about discarding the new Pharmacopœia, they agreed to wait until the United States Dispensatory should appear, and by interpreting the national standard render it available for practical needs. We opine that by the aid of this and other commentaries, all of which we trust will loyally but not blindly support the Pharmacopœia, druggists will be enabled easily to conform to the changes,—changes, most of which, be it remembered, are not wrong in their direction, but in their suddenness and extent. When old names are employed for preparations which have been dropped, the prescriber has a right to expect the formula of 1870 to be complied with; but after the appearance of the commentaries most apothecaries of the first class will conform to the new revision, and the only way in which the practitioner can protect his patients is to see that all apothecaries that he patronizes use the new standard; otherwise sometimes a tincture will be of one strength, sometimes of another.

PUT THE BLAME WHERE IT BELONGS.

DURING the past week a suit was brought before our courts in this city that deserves more attention than it has received from the medical profession. As far as the facts have been published, it appears that it was a case in which a practising physician was sued for malpractice, because a servant-girl, suffering with the measles in a crowded house, was sent to the Municipal Hospital, where she was detained and treated, but during convalescence was seized with varioloid, from which she also recovered. Suit was brought against the physician for material damages for negligence in not exercising sufficient care in diagnosis to discriminate between measles and variola, and in advising the removal of the patient to the pest-house, where she was exposed to infection and was needlessly made to suffer physical distress and incur the additional danger to life of an attack of variola.

Stating the matter from the stand-point of the physician, however, we have a case suffering with some form of acute eruptive zymotic disease, which is in all probability contagious. There are reasons why it is desirable, even necessary, that the patient —a servant in a family—shall be removed to some institution for treatment, especially since the symptoms suggest smallpox. Under these circumstances it seems that the proper, if not the only, plan of action would be to follow the course pursued by the attending physician, and to report the suspicious appearances to the Board of Health, allowing the entire responsibility of the after-treatment of the case to rest in the hands of the city authorities.

As cases of this kind are not of rare occurrence, and as any physician is liable to be made a defendant in similar speculative suits for damages, suffering the annoyance and loss of time in attending court, even if so fortunate as to succeed in obtaining a non-suit, it is certainly worth the while of our medical societies to move in the matter, to protect their members, by obtaining legislative remedy.

It certainly appears that the fault in such a case as the one mentioned justly lies with the city authorities in failing to provide proper accommodation for persons suspected of suffering from smallpox or other contagious disease. A case of measles sent to the City Hospital has a right to be kept from exposure to variolous contagion. It is an intolerable outrage that a patient, while under the charge of the city authori-

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ties and ill with some other form of disease, should be carelessly subjected to the greatly-added risk of an attack of smallpox, when reasonable foresight would prevent it. Isolation alone is needed. The individual, when taken into the charge of the health-officers, should be placed upon a stretcher and protected from cold after removal from his bed by being wrapped up in well-disinfected blankets, then carried into the ambulance and conveyed directly to the hospital, where he should be placed in a detached pavilion ward, perfectly isolated from all communication with the smallpox wards. He should be allowed to remain there until the diagnosis is beyond question, when he should be finally put in the appropriate department of the hospital. We assert very positively that the profession cannot endorse the present system at the Municipal Hospital, by which persons are cruelly exposed to the entirely unnecessary risk of an attack of variola. It cannot approve of the present method by which unvaccinated patients, whose only crime consists in being suspected of smallpox, are placed in the ambulance cheek by jowl with others who really have the disease; and it is by no means satisfied that the quarantine of the institution referred to is fully up to the present requirements of medical science. Are we doing all that we should do or all that we can do to limit the spread of contagious disease? Does not this suggest a subject for consideration by the Philadelphia County Medical Society or the College of Physicians?

A NEW CITY HOSPITAL.

A PETITION has been sent to Councils asking for the removal of the present pauper population from the Almshouse in the twenty-seventh ward to some other locality, and suggesting the propriety of devoting the public property at Blockley to the purposes of a city hospital. It is urged that the buildings are entirely too small to accommodate the able-bodied and infirm paupers, the institution being disgracefully overcrowded; that these would be better off in some place of refuge outside the limits of the built-up portions of the city; and, most forcibly, that the need of increased free hospital accommodation to suit the growing demands of Philadelphia requires that some change of the kind should be made at an early date. It is said that twenty thousand dollars will be all that is needed to make the alterations in the buildings to fit them for hospital purposes. This is a project which must receive the hearty endorsement of the medical profession.

A COMMISSION ON RIVER-POLLUTION.

THE water-supply of Philadelphia having been recently contaminated so perceptibly as to make it the subject of general complaint, and to render it unpleasant, if not unfit, for drinking purposes, many of our citizens have been compelled to resort to the use of melted (imported) ice, and boiling and filtering of the river-water has generally been practised. In some sections of the city, pump-water is being extensively used; and this may be connected with some severe local outbreaks of diphtheria, such as has existed in Frankford, for instance. It appears that the emptying of gas-tanks at Reading is to be accepted as the explanation; but if the city of Reading can pollute the Schuylkill with the refuse of gas-works in winter, it has an equal right to empty sewage into it in summer,—a right which we believe it exercises most lustily. Other towns along the river may and do pollute it with impunity. A commission for the protection of rivers from pollution is badly needed in this State, and we hope that the bill referred to the Judicial Committee of the State Legislature last week, appointing such a Board, to consist of five members, will be reported favorably. Although common

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law affords a remedy for the pollution of streams, yet it is of primary importance to provide some responsible head charged with the express duty of attending to the matter, and of preventing such contamination. If Philadelphians must, however, subsist upon the sewage of Pennsylvania, we can comfort ourselves that the next generation will, under the process of evolution, become adapted to its environments, and will be able to drink occasionally even Croton water without injury.

LEADING ARTICLES.

BURDON SANDERSON ON TUBERCLE-INOCULATION.

THE attention of the medical world has been of late so pointedly directed to the widely-published researches of Koch upon tubercle, and investigation has been so universally directed to testing his methods and reviewing his experiments, that there is a danger that the laborious researches of other pioneers in this field may be overlooked. Whether or not Koch's claims with regard to the identity and relations of the so-called Bacillus tuberculosis can be fully substantiated, will very probably soon be determined by more careful clinical observation and more extended physiological experiment; but in any event, and whether his views are finally accepted or not, the great credit will remain to him of having succeeded in directing the attention of the profession anew to the discussion of this subject, as he has challenged its admiration by his patient, painstaking, and prolonged researches in the physiological laboratory. His labors have undoubtedly given an immense impetus and increased interest to the study of chronic pulmonary disease, which has already resulted, we believe, in a clearer conception and more correct views of the pathological characters of this important class of affections than had been held before.

Without reviewing the remarkable experiments of Villemin, made in 1867, which seemed to establish the fact that tuberculosis should no longer be regarded as a constitutional malady, but as one dependent on a specific infection,—in short, a zymotic disease,—or the investigations of other pathologists to which they gave rise, notably of Lebert and Wyss,* Roustan,† Waldenberg,‡ V. Feltz,§ and others who have continued them, following in the same track, we propose here to consider briefly only the important contributions to this subject made by Burdon Sanderson in 1867 and 1868, which were embodied in a report made in conjunction with the medical officer of the Privy Council of England and published in the tenth and eleventh annual reports of that body.

These experimental and anatomical researches have, in view of recent developments upon the subject, acquired a new and special interest. As they are now out of print and inaccessible to most readers, the portion of the first report embodying Dr. Sanderson's own researches has been recently republished in the *Practitioner*,‖ where a part of the second report also appears. These carefully-conducted investigations merit more than a mere passing consideration, and will repay a brief review.

The problems which the author had in view in undertaking this series of experiments might be formulated as follows:

1. Is it true that the inoculation of tuberculous matter produces in the lower animals morbid changes so constant in their anatomical characters and development that they may be regarded as constituting a disease? And, if so, in what terms can it be defined?

2. In what respects do the morbid results produced by the inoculation of tubercle resemble or differ from other diseased conditions communicable by the same process, particularly pyæmia, glanders, and syphilis; and to what extent are they comparable with the effects produced by the introduction into the circulation of inert solid matter in a state of fine division?

In order to determine the facts upon which just and satisfactory conclusions could be drawn so as to solve these problems, three series of experiments were undertaken: in the first series, healthy animals were inoculated with tubercular products obtained from human tissues; in

* Beiträge zur Experimental-Pathologie der heerd-artigen umschriebenen disseminirten Lungenentzündung, so wie der Uebertragung der sogenannten Tuberculose und anderer entzündlichen und verschiedenen neoplastischer Producte von Menschen auf Thiere. Virchow's Archiv, vol. xli., 1867.

† Recherches sur l'Inoculabilité de la Phthisie. Paris, 1867.

‡ Die Impfbarkeit der Tuberkulose. Allgemein. Med. Central Zeitung, December, 1867.

§ Résultats d'Expériences sur l'Inoculation de Matière tuberculeuse. Gaz. Méd. de Strassbourg, 1867.

‖ Vol. xxix., Nos. 3, 4, 5, and 6.

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the second series, animals were inoculated with morbid products obtained from the first series of animals; and in the third, the animals were inoculated with the material taken from diseased organs of animals in the second series.

In the first series the pathological appearances in twenty-two animals were quite uniform; they may be briefly stated as follows:

1. Induration and thickening of subcutaneous connective tissue.

2. Formation of pus in the track of the wound.

3. Formation of secondary subcutaneous abscesses in the neighborhood.

4. Formation of bands of induration, analogous to farcy cords, between one abscess and others in the neighborhood.

The pus found at the site of the injection did not have the characters of healthy human pus, but was always more or less cheesy. Besides the ordinary pus-corpuscles, there were observed, under the microscope, larger bodies of irregular contour, which resembled conglomerates and always contained fatty particles.

The structural character of the connective-tissue indurations was observed (1) in the cords of induration connecting one abscess with another, and (2) in the walls of the abscess. The cords were found to consist of a dense fibrillated stroma, in which the direction of the fibrillation was parallel to the axis of the cord. This stroma was not in the slightest degree wavy, and when fine sections of it were made in the direction of fibrillation it was found to be studded with innumerable staff-shaped nuclei, all of which assumed the same direction as that of fibrillation. The walls of the abscess always presented the same structure. They invariably consisted of condensed connective tissue, having the same characters as that which formed the cords of induration. This tissue was continuous externally with the normal subcutaneous tissue. Internally the abscess-wall was lined by a layer of pulpy substance. This material (so-called pyogenic membrane) was found, when examined separately, to consist of spheroidal cells embedded in the meshes of a reticulated, transparent stroma. When examined in sections made perpendicularly to the abscess-wall, it could be satisfactorily made out that this stroma was continuous with that of the dense fibrillated connective tissue on which the pyogenic membrane rested.

In cases in which no suppuration occurred, if the animals were killed within four weeks after inoculation, the only morbid alteration which could be discovered consisted in the existence at the seat of inoculation of a node of hardened and thickened skin. If killed at a later period, seven or eight weeks after inoculation, other nodules were found in the neighborhood of the original one, which, except that they were more disseminated, resembled the little masses already referred to, each being enclosed in an indistinct capsule of reticular connective tissue, similar to that which entered into the composition of the nodule. On examining the smallest of these granulations in the recent state, nothing could be discovered, except that it was a mass of hard cells like lymph-corpuscles. In sections of the hardened tissue it was found that these corpuscles were enclosed in a fine mesh-work of fibres, in structure resembling that of a lymphatic gland in incipient fibroid degeneration. In the deeper-lying structures, in the loose connective tissue between the muscular and tendinous layers, it was common to find minute granulations, which were proved to be inflammatory in their origin and developed from connective-tissue corpuscles.

In all the animals subjected to inoculation with the tuberculous material, the subcutaneous lymphatic glands were more or less diseased, the changes consisting in enlargement (hypertrophy), induration, and caseous degeneration, this last resulting either in softening or in the formation of cretaceous concretions. In every instance those glands were the most affected which were in the neighborhood of the inoculation-wound. In some these glands became enormously enlarged. Of the twenty-one guinea-pigs inoculated successfully, in three only were the lungs found free from disease. In the rest the lesions observed consisted in the formation of nodules of gray induration, which were disseminated in fourteen, partly disseminated, partly confluent, in the rest. These changes were in two animals associated with adhesive pleurisy. The nodules presented great uniformity of appearance, and were more numerous on the pleural surface than in the parenchyma of the lung. The smaller tubercles had the semi-transparent appearance usually recognized as characteristic of miliary tubercle. In the larger ones the translucency was con-

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fined to the external parts, the centre being opaque and having a softer consistence than the rest. From their form and structural relations it is evident that they were interstitial new growths, which did not displace the lung-tissue, but were incorporated with it and formed part of it. The microscope showed that, "as regards the lungs, the effect of the tuberculous inoculation is to give rise to the growth of new adenoid tissue in the interstitial substance which surrounds the smallest bronchioles and constitutes the alveolar walls." The nodular form and disseminated character of the growth seemed to the author to be partly accounted for by their relation to the terminal bronchioles, for it may be readily understood that the growth takes its start from the bronchiole, and, extending peripherally, would be likely to assume the conical form of that part of the lung to which the bronchiole leads.

In the formation of nodules in the spleen, as in the lymphatic glands, Dr. Sanderson states that we have an example of a process which stands midway between hypertrophy and new growth. The original structure of the nodule cannot be distinguished from that of the tissue in which it originates, *but its development is different.* Normal in its anatomy, it proves itself to be morbid by undergoing fatty degeneration and necrosis.

The results of the experiments of the second and third series differed in no important respect from those observed in animals inoculated directly with human tuberculous material. It is worthy of notice, however, that although the subcutaneous lesions were as great in some of the cases as in those of the preceding series, the local effects were lighter, and in some inconsiderable.

Although, in reviewing all the experiments of the different series, it was found that suppuration at the point of inoculation, and also in its vicinity, occurred in nearly all, yet this was not essential to the production of internal lesions. In all of the infected animals, however, the lymphatic glands corresponding with the point of inoculation were enlarged; usually there was softening; there was always caseous degeneration. In eight infected animals the lungs were found quite free from disease. Probably in no instance was the liver absolutely healthy, the lesions being variable in nature and extent. The spleen was also enlarged, except in one case. The internal lymphatic glands, receiving their tributaries from diseased organs, were always themselves enlarged, indurated, and caseous.

The reply to the first query, therefore, must be that the inoculation of tuberculous matter produces in guinea-pigs morbid changes so constant, both in their anatomical character and development, that they may be regarded as constituting a disease. The true relation of the human disease to its bestial derivative has not been yet determined. The results of the entire inquiry are summed up in the following propositions:

"1. The characteristic product of tuberculosis is not an aggregation of shrivelled particles of irregular form, but a tissue composed of lymph-corpuscles held together by a net-work of hyaline connective substance.

"2. There is a close structural analogy between this tissue and that of certain follicular organs belonging to the lymphatic system,—*e.g.*, the follicles of Peyer, the ampullæ of the lymphatic glands, etc.

"3. All the favorite seats of tubercle are naturally characterized by the presence of this tissue, which, from the analogy stated above, may properly be called *adenoid.*

"4. The natural distribution of adenoid tissue in the body is in intimate relation with the lymphatic system. In the great serous membranes (which Von Recklinghausen's discoveries have taught us to regard as walls of lymphatic reservoirs), it forms sheaths round the blood-vessels, or masses of microscopical dimensions and irregular contour underneath the epithelium. In the solid viscera it is distributed here and there in the course of the lymphatic channels.

"5. In the peritoneum, tuberculosis primarily consists in the enlargement or overgrowth of these sheaths or microscopical masses of adenoid tissue, and consequently the tuberculous nodules which are formed have the same intimate structure, and stand in the same anatomical relation to the vessels and epithelium. In the viscera the essential lesions also consist, not in new growth, but in overgrowth of pre-existing masses of adenoid tissue.

"6. The primary local lesion in artificial tuberculosis, whether the cause be simple wound or specific inoculation, consists in the development at the seat of injury of granulations or nodules which have similar struc-

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tural characters with those of adenoid tissue elsewhere, but cannot as yet be shown to be in relation with the absorbent vessels.

"7. The first step in the dissemination of tubercle consists in its being absorbed primarily by the lymphatics (which convey it to the lymphatic glands, of which they are tributaries), and secondarily by the veins. Having thus entered the systemic circulation, it is distributed universally by the arteries. The serous membranes seem, however, by preference to appropriate it, and from them it extends by contiguity to the superficial parts of the organs which they cover.

"8. The final stage of the process consists in the tertiary infection of the glands of each diseased organ, which glands consequently undergo enlargement and induration, and eventually become partially caseous. The enlargement is due to the multiplication of cells in all the tissues of the organ, but more particularly in the alveoli,—the hardening to a process of fibrous degeneration,—while the caseation consists in slow necrosis of the previously hardened and anæmic parts. From the first the gland is incapable of performing its functions, but it is not until induration commences that the absorbents of the organ to which it belongs are completely obstructed.

"9. In the liver of the guinea-pig, and in some other organs, tuberculous tissue undergoes a fibroid degeneration and caseation, the results of which cannot be distinguished from those observed in the normal adenoid tissue of the lymphatic glands and of the spleen.

"10. As regards the question of a *specific contagium* of tubercle, we think it very important to note that this is not as yet disproved by the facts of traumatic tuberculosis. It still remains open to inquiry whether or not injuries which are of such a nature that air is completely excluded from contact with the injured part are capable of originating a tuberculous process. The results of the following experiments undertaken at the instance of Mr. Simon, with special reference to this question, seem indeed to suggest that they may not be so. Setons steeped in carbolic acid were inserted in ten guinea-pigs on the 24th of September, 1868, each animal receiving two. At the same time, extensive fractures of both scapulæ were produced on five others, care being taken not to injure the integuments. No tuberculosis or other disease of internal organs resulted in either of the cases. The facts certainly point to the necessity of further investigation in this direction."

Subsequent studies in this field, made by Hueter and De Rausche while engaged in investigating the proximate cause of inflammation, appear to establish the fact that wounds protected from infection do not develop inflammation. If Dr. Formad's* observations are correct, however, inflammation is necessary to the development of tubercle, but scrofulous individuals only can have this peculiar tuberculous inflammation. F. W.

CORRESPONDENCE.

CHICAGO LETTER.

THE management of our county hospital has not been above suspicion. For some time past there had been a pretty free local discussion of the affairs of this important charity, resulting in a pseudo-investigation by the board of commissioners,—a political body too much interested to inquire honestly into and punish offences against the Trust, lest, through an employé, they offend political support. The whole matter was brought before the December grand jury; but that body appeared too sympathetic to do more than dodge. It was represented to the jury that the hospital had been mismanaged, the money of the county appropriated for the maintenance of a public charity squandered, and false entries made in the books to cover the frauds. When the charges were first brought to the notice of the grand jury, that body signified its willingness to investigate, and an understanding was entered into that it would be taken up at a stated time; but when that time came, obstacles were thrown in the way, and so on, from time to time, notwithstanding about forty witnesses were kept present waiting. The chief witness charges that the hospital people abducted him. This hospital costs the county in the neighborhood of one hundred thousand dollars a year, and is too important an institution to be given over to misrule without the interposition of some objection. The grand jury for January is said to be made up of such material as will insure a complete investigation should the matter be laid before it.

Our State Board of Health still continue the work of weeding out the tares of the medical profession coming within their jurisdiction. Thirty-one cases of imposition have lately been brought to light, where the parties had

* "The Bacillus Tuberculosis, and some Anatomical Points which suggest the Refutation of its Etiological Relation with Tuberculosis." *Ante*, page 109.

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falsely made oath that they were graduates of foreign medical universities, the latest being that of a barber who personated a real graduate of Göttingen. In most of the cases, it appears, the diploma used represented some deceased physician.

The so-called private lying-in hospitals have been receiving some attention from the police. One establishment in particular was placed under surveillance, resulting in catching the madam in the very act of delivering a woman of a five-months' fœtus. The affair created quite a sensation, but, like all such occurrences in a large city, is soon forgotten.

The senior class of our new school—College of Physicians and Surgeons—has had a pretty heated contest over the selection of a valedictorian. The proceedings were not the most dignified, and, though two men have been elected to the position, it is not considered settled.

The City Council have just completed the list of streets ordered to be paved during the coming summer, and it is gratifying to observe the somewhat slow, but nevertheless certain, displacement of the unwholesome and bad wooden pavement for the more durable and dry macadam and asphalt. As a sanitary measure, this change is one that should command the approval of every resident.

F. W. M.

January 15, 1883.

PROCEEDINGS OF SOCIETIES.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

A CONVERSATIONAL meeting of the Society was held at the hall of the Society, November 22, 1882.

DISCUSSION ON STYPTICS.

Dr. F. J. Buck thought that it would be inadvisable to abandon entirely the use of styptics. They had a certain degree of practical value. He had seen life saved by their use in cases in which other methods did not apply. One instance was of hemorrhage of the frænum from chancre. In this case he could not see how any other method would answer. Compression or ligation could not be used, and styptics were the only means.

Dr. Willard was glad to see the subject brought up. Some of the worst results and the worst sloughs he had ever seen were in cases in which strong styptics had been used. The practice was slovenly, unsurgical, and unscientific. It was in the end really far easier to find and close the vessels at the time than to stop the bleeding by plugging with rags steeped in various solutions. In cases of oozing from surfaces we can resort either to pressure or to the action of cold air. In hospital practice he had often found wounds treated by the free use of styptics, and these would act as irritants, which would set up inflammation and cause sloughing. It is, however, in cases of a small bleeding surface possibly allowable to use mild styptics, hot water being one of the best; but it is better in most cases to search for the bleeding vessel and secure it, or apply pressure. Styptics may stop the hemorrhage for the time, but their use is often followed by secondary hemorrhage very difficult to control. He thought the surgeon who used styptics did not do his duty, when he knew that the bleeding proceeded from either injured arteries or veins.

Dr. Sheppard said that cases sometimes arise in which no means of controlling hemorrhage other than the use of styptics is applicable. He instanced a case of removal of a portion of the tongue by the galvanocautery, in which secondary hemorrhage occurred, and no ligature could be applied. The choice was between the use of the hot iron and Monsel's solution. The latter was used diluted, and succeeded well. Some clots were, of course, left, but they did not do any harm.

Dr. Eskridge said that surgeons often spoke of the "fashions" in medical practice, and he noticed to-night that surgery also had its fashions. He recollected that some years ago Monsel's solution was highly praised by surgical writers as having, among other properties, the power to *promote* primary union. It appears from Dr. Roberts's paper that it interferes with such result. He would like to know whether any objection existed to hot water. He was in the habit of using this by means of a syringe in epistaxis, or, if the water is held in the palm of the hand, it may be snuffed up by the patient. He has seen it used successfully in bleeding from small vessels, especially in plastic operations.

Dr. Roberts, in closing the discussion, said that in such a case as that mentioned by Dr. Buck—hemorrhage from frænum of the penis—he would either ligate or use torsion. Hot water was good for bleeding from small points, and was the least objectionable of all the styptics. It should be used at a temperature of about 105° F. Ice also sufficed, but he did not like to use it, because it chills the patient. He thought, however, that hemorrhage that would stop on the application of hot water would generally stop spontaneously or upon the application of pressure. In such a case as hemorrhage of the tongue, such as mentioned by Dr. Sheppard, he would certainly not advise Monsel's solution. It was the worst of all the styptics. The clots were leathery and coarse, and might get down the throat. He would advise torsion or ligation of the bleeding point, perhaps by passing a thread through the tissues with a needle. In applying pressure to control bleeding we must be careful not to interfere with the venous return by making linear constriction above the wound, as this might cause recurrence of the hemor-

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rhage. He thought that Dr. Eskridge was wrong in saying that styptics were popular with surgeons as recently as 1876. Eminent authorities in surgery have generally opposed them in recent times. Billroth, for instance, was against them. Even in the hemorrhage after tonsillotomy, which was said to be sometimes serious, Dr. Roberts did not think styptics required.

DISCUSSION ON PUERPERAL HEMIPLEGIA.

Dr. Mills said he had seen a few cases similar to that detailed by Dr. Stone,—one some time since in consultation. A lady was attacked with hemiplegia after confinement, and no heart-disease or other local condition sufficient to account for the trouble could be found. It was probably a case of embolism. Several hemiplegic cases with a history of paralysis, having originated after labor, had come under his notice. The interesting point was, What was the pathological condition? The theory of multiple embolism was generally accepted. The occlusion of arteries at several points could not in these cases be accounted for by the supposition of phlebitis.

A CONVERSATIONAL meeting was held at the hall of the Society, December 13, 1882.

DISCUSSION ON DRUG-ADULTERATION.

Dr. Cohen said that it might be supposed that the agitation upon this subject would have had the effect of making druggists especially careful; but within the past week he had occasion, in consultation, to order suppositories of quinine made with cacao-butter, for a diphtheria case, and the next day the nurse showed them to him undissolved in the chamber. On inquiry by the physician in attendance, the druggist (a "first-class" druggist) stated that they had been made with white wax.

Dr. Eskridge said that a friend of his had made some investigations into the strength of laudanum as sold by druggists, and had found many specimens only twenty-five per cent., some fifty per cent., and others seventy-five per cent., of the officinal strength. The latter were not numerous.

Dr. Ludlow thought the communication of Dr. Leffmann deserving of serious consideration, and was glad the subject had been taken up. This Society will support him in his laudable effort. Of one thing he was sure, and that is that we have a vigilant sentinel on the ramparts. There need be no trouble with the way in which these important facts were ascertained. One might as well find fault with the mode of finding out any fraud. "No rogue e'er felt the halter draw with good opinion of the law." Another point the doctor has brought to the attention of the Society, is the unwarranted action of the recent so-called revisers of the U. S. Pharmacopœia. Their change in the strength of laudanum particularly, a preparation in so common use, is one of an outrageous character, and deserves the severe condemnation of this and every other well-organized society. Just think!—*fifty per cent.* stronger than now!! This Society should let the druggists and apothecaries know that we *countenance no such change, and that we expect them to use the old formula.* It would be not amiss for us to have a committee of our body to revise the Pharmacopœia for our use.

Dr. Ludlow did not think well of the practice of giving quinia and iron in sugar-coated pills, and said he was, in general, opposed to the plan of using ready-made prescriptions. He thought that each case should be *prescribed for separately*, and each case might require a variation of remedies which the doctor only knows. He cited a case in which he had prescribed a mixture of iron and quinine in pill form, and, finding that the pills were without effect, he investigated the matter, and it turned out that they were passed through the bowels without change. He had one of the unused pills, and they were so hard as to require the blow of a hammer to break them. He thought that it is the duty of the physician to inquire into the standing and ability of apothecaries, and in important cases, or where difficult prescriptions are involved, it is best to exercise some personal supervision in the matter. He did not altogether favor the practice of physicians furnishing their own medicines, as nowadays few physicians had sufficient pharmaceutical knowledge, and, besides, he was afraid that the stomachs of patients would suffer.

Dr. W. R. D. Blackwood remarked that the subject was of the more importance as physicians as well as patients are at the mercy of druggists; because, once a prescription is compounded, it is usually impossible to distinguish without analysis its integrity. In his own experience several serious and indefensible substitutions have been made, in every case by well-known and apparently respectable pharmacists. In one instance cinchonia sulphate was substituted for cinchonidia sulphate, and in another the same drug was dispensed for quinia. The druggists in each instance, when cornered, owned to the fraud. This course will, if not checked, compel us to dispense our own medicines before long, and, as experience shows us that simplicity in prescriptions and less drugging grow on the physician as he gets older in practice, the problem is not so difficult as is thought by many. The druggists are lately not only defiant as to their right to renew indefinitely prescriptions without the physician's order, but are impudent enough to declare openly their ability to prescribe in any or all cases where the patient is foolish enough to let them do so.

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NEW YORK ACADEMY OF MEDICINE.

STATED MEETING, JANUARY 4, 1883.

FORDYCE BARKER, M.D., LL.D., President, in the chair.

THE scientific paper of the evening was read by Dr. F. H. BOSWORTH, and was entitled "Tumors of the Nasal Passages."

Dr. BOSWORTH first directed attention to adenoid growths occurring in the vault of the pharynx, and stated that they gave rise to a very common and annoying symptom,—namely, a copious discharge of mucus or muco-pus from the nasal passages. The true condition is commonly obscured under the exceedingly meaningless term "nasal catarrh." He then mentioned some of the conditions which might give rise to nasal catarrh, as chronic rhinitis, dry catarrh, nasal polyp, deviation of the septum, necrosis, foreign bodies, the existence of these adenoid growths in the vault of the pharynx, etc.

He believed that these adenoid growths are simply an hypertrophied condition of the normal tissues in the region in which they occur. He then described the faucial tonsil in its normal condition. The presence of these growths is the source of inflammatory changes resulting in hypertrophy, and was first described by Luschka. They are more or less distinctly outlined, and vary in size from that of a coffee-bean to that of a large chestnut, even sometimes larger. He had submitted several specimens to Dr. Heitzmann for microscopical examination, who reported that their true nature is an hypertrophy of the normal glandular elements in this region, and not true adenoma or tumors. He had had seventy-five cases under his observation,—forty-nine males and twenty-six females. Under ten years of age there were five cases; from ten to fifteen years, sixteen cases; from fifteen to twenty, twenty-seven cases; from twenty to thirty, twenty-three cases; from thirty to forty, two cases; from forty to fifty, one case; and over fifty, one case.

The lecturer remarked that there is a striking analogy between the appearance of these growths and the faucial tonsil, but the most frequent condition with which they are associated is hypertrophic rhinitis. In ten cases he had found this associated with enlargement of the faucial tonsil; in four cases it had been associated with dry catarrh. The most prominent cause of the condition is hypertrophy of the mucous membrane excited by the stimulus of repeated colds. He did not believe that it is ever the manifestation of systemic dyscrasia.

The diagnosis is usually easy, and for this purpose digital examination is not absolutely essential. For illuminating purposes, however, an ordinary gas-jet is not sufficient, but sunlight should be employed. The prominent and most troublesome symptom is an excessive discharge of muco-pus. The source of the discharge is in the hypertrophied glands themselves. Another symptom is the altered character of the voice, the voice being like that of one suffering from cold in the head: it has been termed the "dead voice." In order to give rise to this change in the voice, the growth need not be large. The head-register fails first, so far as singing is concerned, and is muffled. With reference to the impairment of the hearing, it is not due to pressure upon the Eustachian tube, as had been supposed by some. He regarded extension of catarrhal inflammation to the Eustachian tube as exceedingly rare. Tinnitus aurium might perhaps be caused partly by pressure. Nasal stenosis is a prominent symptom, and is present in cases where the growth has not attained to an unusual size. Cough is present in certain cases.

His treatment was extirpation by the use of a modification of Jarvis's snare-écraseur. He could not recommend the actual cautery or acid caustics, which were employed by some.

Nasal polypi are myxomatous tumors. He had never met with one in the naso-pharynx. A single polyp is very rare. At his clinic at Bellevue Hospital there had been treated during the past year one thousand six hundred and forty-one cases, and nineteen of these were cases of nasal polypi. He had had sixteen cases in private practice, which made thirty-five cases which he had seen within a year. The source was usually the middle turbinated bone. He had seen only two cases in which the polyp was attached to the septum. He knew of no cause. It was purely a local disease. It is commonly taught that they are caused by nasal catarrh, but he believed that they frequently occur independently thereof. The most prominent symptom is blocking up of the nasal passages, with profuse watery discharges. Very long and distressing attacks of sneezing are an important sign in diagnosis, especially in the early stage of their development. Spasmodic asthma, he thought, is of more frequent occurrence than is generally supposed. Their form is usually pear-shaped, and, unless they develop posteriorly into the naso-pharyngeal space, their size could be no greater than that of the nasal passage.

In the treatment, Jarvis's snare-écraseur furnishes all the advantages and none of the disadvantages of Hilton's snare, and the important principle in it is more that of the écraseur than that of the snare. One objection to Jarvis's snare is the fact that the hand is always in the line of inspection, in order to obviate which he had constructed an instrument which is a combination of Jarvis's écraseur and Wilde's snare. He did not believe it necessary to apply anything with the view to the prevention of a recurrence of the growth.

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DISCUSSION.

Dr. LEFFERTS said there were many points in the interesting paper which need not be discussed, as they were generally accepted; but there were certain others to which he wished to take decided exception. First, with reference to the adenoid growths: they were of very common occurrence, as any one conversant with the literature was aware, and as was also shown by the number of specimens passed round by the author of the paper. There are certain cases among young persons in which the hypertrophy is hardly sufficiently abnormal to demand active treatment. It was not always necessary to remove these hypertrophied tissues, for very often they disappeared by a gradual process of atrophy towards the period of puberty. There were cases, of course, in which they attained to sufficient size to block up the nasal passages to a certain degree, interfering with the voice, in which he would recommend surgical interference. That there was a gradual process of atrophy at the age of puberty was a fact which was not sufficiently appreciated even by those in his own specialty. With regard to the treatment, Jarvis's snare was a good instrument, but it was a fact that it had not been commonly accepted by the profession, and he believed that a certain form of biting forceps possessed the advantage that they could be used by the unskilled operator with greater ease than could the snare, and just as effectually. Passing from the subject of adenoid growths, Dr. Lefferts spoke of nasal polypi, and referred to two forms of growth occurring in the nasal passages which had not been mentioned by the author,—namely, cystic tumor and papilloma. He had seen one case of the former, and had found the record of one in literature. He had known papilloma springing from the septum to give rise to dangerous hemorrhage. With regard to the head-register being the first to be affected in the singing voice from the presence of adenoid growths, he had not found such to be the case. According to his observation, the medium register was the first to be affected.

Dr. BRANDEIS was of the opinion that, along with the existence of the adenoid growths referred to, there must be some inflammation of adjacent tissues, and that the inflammation was liable to extend up into the Fallopian tubes, and he believed also that impairment of the hearing was consequent largely upon obstruction of the tube arising from a congestion or swollen condition of its mucous membrane. Air was prevented from entering the middle-ear cavity, and the drum-head assumed malposition from pressure of air upon it externally.

In reference to the use of the actual cautery in the naso-pharyngeal space, he had resorted to it with the greatest benefit, and had never found its use attended with any evil results. It subserved the double purpose of an écraseur and a caustic, removing the growth and preventing a tendency to a recurrence,—a point of much practical importance in cases of nasal polyp.

Dr. LINCOLN thought, with regard to the necessity for removal of abnormal growths in the post-nasal region, particularly hypertrophies of the normal tissue, that it depended altogether upon whether they were the source of impaired health or produced any special discomfort. The discharge which these growths gave rise to might be the cause of harm not only in the pharynx, but, as he believed, also in the stomach, producing indigestion. Besides, as mentioned by Dr. Bosworth, they had a localized influence upon distant parts, as in exciting asthma. A patient under his care had suffered regularly every winter with spasmodic attacks of asthma, which a visit to a Southern climate failed to relieve. There was no apparent cause of the attacks, except a very small adenoid growth in the vault of the pharynx. After this was removed, the asthmatic symptoms entirely disappeared. There were certain cases of malformation of the chest in children which he was unable to account for except from the inability to breathe through the nose, due to the presence of some of these growths. He took issue with Dr. Bosworth in the opinion that all methods of treatment were inadequate except that with the wire écraseur. He had published a series of cases in which the treatment had been practised with the galvano-cautery and chromic acid with excellent results. The use of the Vienna paste was also a very good method of treatment. Jarvis's snare, however, was an invaluable instrument, for use in both the anterior and the posterior nares, and he believed that nothing could be devised which would replace it. He would call attention to a remedy which he had recently used with most satisfactory results in cases of adenoid growths in the vault of the pharynx, especially where they were of moderate size,—that was, boracic acid.

Dr. ROBINSON was of opinion that, while Jarvis's snare-écraseur was probably the best instrument in the removal of these growths, there were other methods which were also quite effectual, such as the galvano-cautery, caustics, etc. He would impress the point with regard to the evil influence of sucking out the breast, so to speak, when breathing through the mouth during the presence of an obstruction in the nasal passages. He believed that there was often propagation of the inflammatory process in the pharyngeal space to the Eustachian tube, and an impairment of hearing therefrom.

Dr. BOSWORTH, in closing the discussion, remarked with regard to non-operative interference in cases where the adenoid growth was of small size and the patient had not attained to the age of puberty, when it was pos-

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sible atrophy of the hypertrophied structure would take place, that it often happened the period of puberty was at some distance, and the child might be suffering from symptoms which should be relieved. The tendency was to weak throat, sleepless nights, impeded respiration, etc.; and it was the surgeon's duty to relieve such symptoms, even if he felt certain that the growth would become atrophied within a comparatively short space of time. Furthermore, we could never be certain that atrophy would take place even when the age of puberty was reached. With regard to the use of the forceps in the place of the snare, there was the objection that it could not be made to reach the entire growth on account of the peculiar anatomical situation. His opinion that the head-register was the first to be affected in singing was based largely upon the statements of singers themselves. With regard to the extension of catarrhal inflammation into the Eustachian tube, in the numerous cases which he had observed there had seldom been present at this situation evidences of inflammation in the form of redness, swelling, pain, and heat. As to the impairment of hearing, he believed the levator palati muscles had much to do with the admission of air into the middle ear, and that their proper function was interfered with during the presence of adenoid growths in this neighborhood.

REVIEWS AND BOOK NOTICES.

A GUIDE TO THE PRACTICAL EXAMINATION OF THE URINE. By JAMES TYSON, M.D. Fourth Edition. Philadelphia, P. Blakiston, Son & Co., 1883.

The appearance of four editions of this book in eight years is an indisputable *raison d'être*, and we content ourselves with noting the fact that the fourth edition is, and that it is well done.

GLEANINGS FROM EXCHANGES.

DIABETES MELLITUS TREATED AT NEUENAHR.—In a communication read before the Medical Society of London, Dr. Schmitz, of Neuenahr, gives a number of interesting data obtained from observation of 600 cases of diabetes which had been under treatment at this celebrated health-resort. Of these, 420 were Germans and 180 foreigners; 5 were under 10 years old, 25 between 10 and 20 years, 56 between 20 and 30, 104 between 30 and 40, 134 between 40 and 50, 196 between 50 and 60, 60 between 60 and 70, and 20 between 70 and 80 years of age; 248 of the patients came of families in which diabetes had already appeared; 51 came of families in which some serious psychosis had manifested itself, 45 more had relatives who were remarkable for eccentricity or irritability, and 42 came of families which were remarkably tuberculous; 93 of the cases were Jews, and of these 48 had diabetic relatives, 18 had relatives with psychoses, and 9 had tuberculous relatives. In 8 cases both husband and wife were at the same time suffering from diabetes; in 183 cases the immediate exciting cause of the disease appeared to be some acute disturbance of the nervous centres, and only in 18 was there any essential disease of the nervous system; in 153 cases the diabetes was attributable to an excessive indulgence in sugar and saccharine food; in 45 cases it was attributable to gout, and in several instances alternated with a gouty attack. It was in these cases that alkaline waters and salicylate of soda were most useful. In 22 cases diabetes seemed to be the result of the exhaustion consequent on some severe and long-continued disease. The specific gravity of the urine varied from 1025 to 1035; the highest was 1042, the lowest was 1013, and in this latter one to five per cent. of sugar was found. The average daily amount of the urine was 2500 c.c. to 3500 c.c.; in only one case was it 9000 c.c.; in 14 cases it was as low as 500 c.c. to 800 c.c., in spite of taking 1600 grains of the sprudel water; but wherever the quantity of urine was small the perspiration was great, and where perspiration became copious the sugar decreased,—which may explain the beneficial action of pilocarpin and of Turkish baths. Generally the day-urine contained most sugar, exercise diminished it, while mental exertion and nervous excitement and pain increased it. The sugar varied from one to three per cent.; in only one case was it as high as eight per cent. When albumen was present, as not unfrequently happened, it seemed to be in inverse relation to the sugar. After the disappearance of the sugar, a material increase of phosphates, and, in some, of oxalates, was noticed. In four cases hippuric acid was present. In two cases sugar was simulated by a form of uric acid when the copper test was used; the fallacy was rectified by the polariscope. When the skin was dry, there were considerable polyuria and much emaciation. If there was a fair amount of sensible skin-action, the emaciation was not marked. Thirty-five cases were very fat, and other 46 had lost little of their former corpulency. The muscular weakness is the consequence, mainly, of degeneration of structure, which affects not only the voluntary muscles, producing the unsteady gait and the easy fatigue, but also the cardiac muscles, producing the small pulse, the feeble heart-contraction, the syncopic attacks, and the death by asthenia, the intestinal muscles, producing the constipation, and the ciliary muscles, producing the errors of accommodation. The cardiac weakness accounts probably for some of the cases of death, with accompaniment of coma or

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convulsions, which have been attributed to acetonæmia. Of the condition called acetonæmia there were six cases. That it is caused by the absorption of some noxious product of fermentation in the bowels is certain, but whether this is always acetone is doubtful. The case was relieved as soon as a free evacuation of the dark-colored, very fetid contents of the bowels was secured by castor-oil. If this could not be accomplished, the patient died.

The boulimia observed in some of these cases is looked upon as a neurosis, and the craving for sugar is compared with the alcohol-craving of the drunkard. Early loosening and loss of the teeth is often connected as a symptom with the onset of diabetes. In neuralgic attacks, codeia and salicylate of sodium were found to be useful, and salicylic acid lotions are recommended for the relief of vulvar pruritus.

Tuberculosis became developed in the course of diabetes in twenty-six cases only. Impotence was frequently present, but in twelve cases sexual desire and capacity was increased. Balanitis was occasionally observed, and was relieved or cured by strict cleanliness and salicylic acid lotions. Dimness of sight was frequent, partly produced by accommodation-disturbances and partly by turbidity of the lens, which disappeared with an improvement in the diabetes, except in three cases, where there was cataract, which was successfully extracted in all. Boils were common, produced by nutritive disturbances of the skin, as also erysipelas and phlegmon.

According to his experience, the prognosis of diabetes is more favorable than is generally stated.—*British Medical Journal*, December 23, 1882.

PASTEUR ON RABIES AND PROTECTIVE INOCULATION.—A communication from M. Pasteur was recently presented before the Académie de Médecine, Paris, in which some definite ideas of the causation of this disease are set forth. He asserts that—1. All varieties of the disease proceed from the same virus. 2. Nothing can be more varied than the symptoms of rabies, each case, so to say, having those proper to it; and there is every reason to believe that their characters depend upon the nature of the points of the nervous system, the encephalon and spinal cord, wherein the virus is localized and cultivated. 3. In rabid saliva, the virus being associated with various microbes, inoculation with it may give rise to three kinds of death,—through the microbes of the saliva, the excessive secretion of pus, and rabies. 4. The medulla oblongata of a person dying of hydrophobia, as well as that of any animal dying of rabies, is always virulent. 5. The rabid virus is not only met with in the medulla oblongata, but also in all parts of the encephalon. It is also found localized in the spinal cord, and frequently in all parts of the cord. As long as the structure of the encephalon and spinal cord is not invaded by putrefaction, the virulence persists there. 6. In order to induce rabies with certainty and rapidity, recourse must be had to the inoculation, by aid of the trephine, of the surface of the brain, within the cavity of the arachnoid. The suppression of a prolonged duration of the period of incubation, and the certain appearance of the disease, are also secured by the introduction of the virus into the circulation. By the employment of these methods, so favorable to the experimental study of the disease, rabies may be made to appear at the end of six, eight, or ten days. 7. M. Pasteur and his assistants have met with cases of the spontaneous cure of rabies, but only when the earlier rabid symptoms have appeared, and never after the acute symptoms have ensued. They have also met with cases of disappearance of the early symptoms, with a recurrence after a long time (two months). The acute symptoms have been followed by death, as in the usual course of the disease. 8. In one of their experiments on three dogs inoculated in 1881, two of the dogs took the disease rapidly and died, but the third, after having manifested the early symptoms, recovered. Inoculated again, on two occasions in 1882, by means of the trephine, it did not become mad, so that the rabies, though benign in its symptoms, did not undergo relapse. He claims, in conclusion, that he has four dogs at present which cannot take rabies, having been protected by inoculation of the virus. Should these statements receive confirmation from more extended experiments, and satisfactorily demonstrate the fact that rabies in the dog may be prevented by inoculation, the question of the stamping out of the disease is easily solved, since man only is liable to contract the disease from a rabid animal, and the means of opposing its development in the dog would almost rid man of this terrible scourge. —*The Medical Times and Gazette.*

THE HYGIENIC TREATMENT OF ALBUMINURIA.—The importance of hygiene in the treatment of Bright's disease has been recognized by all authorities upon the subject. The most recent important contribution to the subject is that by Senator in an address before the Berlin Medical Society (*Berliner Klinische Wochenschrift*, No. 49). He does not regard the loss of albumen as the most serious feature in the case, but it is important in so far as it aids our prognosis by indicating the amount of structural change suffered by the kidney. As regards the treatment of albuminuria, Senator points out the general uselessness of drugs in this regard, and dwells particularly upon the imperative importance of hygienic questions. With reference to feeding, the need of frequent rather than full meals is mentioned. As regards the choice of food, eggs and meat should be given sparingly.

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Lichtheim has pointed out that the use of food rich in proteids may lead to an increase of the urea in the blood, with its possible consequences. Fleischer has proved the same for phosphoric acid, and Senator, by induction, extends the idea so as to include the other end-products of the metabolism of proteid bodies. In consideration of the inability of the diseased kidneys to separate and remove these waste products, he recommends the use of meat poor in albumen,—veal, poultry, and white flesh generally, including fish; and the less albuminous vegetables are preferred, such as greens, salads, fruits, etc. The digestive powers of the individual must be taken into consideration, however, and the use of fatty elements will depend upon the patient's ability to assimilate them. Spirits and beer are interdicted, but red wine is usually allowed. Spices and strong aromatics should be avoided. Milk is especially valued as a diet, and may be associated with white bread as a milk cure. Mineral waters and baths are beneficial in some cases, the latter having their chief effect on the skin. Due care of the skin, bodily rest, and the value of fresh air are insisted upon; but, as much physical exercise is injurious, carriage-exercise is the proper substitute. The good effect of a change of climate is often very noticeable, which is not attributable solely to change of air and water. In warmer regions there is an additional advantage observed in the fact that the diet is more vegetable than animal, and the southern dry climates, such as the Riviera or Cairo, are preferred.—*Medical Times and Gazette.*

MISCELLANY.

THE PHILADELPHIA NURSE REGISTRY BUREAU.—We take the following interesting extracts, showing the mode of carrying on the Directory, and illustrating its usefulness, from the first annual report of the committee on the Directory for Nurses, presented to the College of Physicians of Philadelphia, December 6, 1882.

The Directory was formally opened May 15, 1882, though it had really been in operation since May 1. With regard to the details of management the following items of information are given:

The "application blank" for nurses requires a statement of the name, age, address, qualifications, kind of nursing preferred, rates of charge, and both medical and family references. If the replies from the persons referred to are satisfactory, the nurse is registered on the payment of a fee of three dollars. This fee is paid but once; up to January 1, 1883, it has been only two dollars. Moreover, detailed inquiries are sent both to the physician and the family after every engagement is terminated, in order to learn more and more of the nurse's qualifications and faults, if there be any of importance.

The following are the rates of charge adopted for information leading to the engagement of a nurse:

Between 7 A.M. and 6 P.M.	$1.00
Between 6 P.M. and 10 P.M.	2.00
Between 10 P.M. and 6 A.M.	3.00
For wet-nurses, uncertified	5.00
For wet-nurses, certified (after careful medical examination of mother and child)	10.00
For finding and sending a nurse, an additional dollar.	

Up to December 1 the number of applications for registration has been 296. Fully registered, 213; approved and awaiting registration, 17; disapproved, 19; stricken from the roll for grave faults or defects, 2. Of the registered nurses there are 26 males and 187 females; 35 graduates of training-schools; 165 non-graduates; manipulators, male and female, 11; cuppers and leechers, 3.

The number of calls for nurses has been 342 during the seven months, an average of about 50 a month. It has furnished as many as eight in a day, and five to a single family.

Regarding the nurses' charges, it is said that the Directory is in no sense only for those who desire the highest-priced nurses. The needs and emergencies of sickness know no distinction of purse or class. It provides promptly and cheerfully for the wants of all The Directory has had a large number of nurses, many of whom have had a very large experience, who only charge from five to eight dollars per week. It has, however, nothing to do with the rates charged by the nurses, save to register them for the information of applicants and to see that nurses do not charge beyond these registered rates. In many cases they charge less.

The Directory has not only male and female nurses for acute illness, but nurses for invalids, manipulators, cuppers and leechers, etc., on the register. A large number of the nurses register for contagious diseases and insanity.

One of the most important results achieved through the Directory is the promptness with which calls to grave emergencies are met. Cases of accident, sudden illness, insanity, smallpox, etc., often brook no delay; and yet under the old system they were the very ones in which it was most difficult to procure good nurses, and especially with promptness, usually within two or three hours.

Two cases of illness occurring on the same evening will perhaps best illustrate the advantages of the Directory over the previous unsatisfactory methods of obtaining nurses. At 7.20 P.M. a gentleman from Wilmington, Delaware, came to the office to obtain a nurse for his wife, who was urgently sick after confinement. His return train left at 8.30 P.M. By 8.15 he was in the station with a most experienced nurse, who had a ten weeks' engagement as a result. The same evening at 10 P.M. a gentleman in the city telephoned for a male nurse immediately for a sudden emer-

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gency. The telegraph and messenger service were at once invoked, and by 11 o'clock the nurse was on his doorstep, and stayed with him for three weeks.

In conclusion, the committee especially calls the attention of members of the medical profession to the great service the Directory may render them in speedily procuring trusted and skilled nurses for their patients, and asks their hearty support in its work. Only thus can the Directory be made self-sustaining and reach its highest efficiency. The amount of time and trouble it can save physicians, who formerly had to search all over town for a day or more to get a reliable nurse, is in itself not a slight advantage. Moreover, if they wish any one of a number of nurses whom they already know and like, they have only to furnish a list of such names, and if any one of them be disengaged the secretary will send that one in preference to a stranger.

While Philadelphia has profited most by the establishment of the Directory, the neighboring towns and villages and summer resorts have been especially benefited. In seven months it has furnished fifty-one nurses outside of Philadelphia, of whom twenty-three have been sent beyond the limits of the State.

It has also undertaken to supply wet-nurses; thirty-five applications have been made, but it has been able to supply only thirteen, and the report calls especial attention to this fact in order to obtain many more of this class of nurses.

So useful have the Philadelphia and Boston Directories proved, that Washington, Cincinnati, Toronto, and San Francisco are taking steps to establish them there.

The Directory is open all hours of the day and night to applicants for nurses. Application may be made in person, by letter, or by telegram. Persons applying by letter are requested to enclose the full fee. Applicants out of the city should prepay the fee and the price of a ticket to the applicant's address by telegraphic money order to the Superintendent, Miss Emily C. Thomas, at the College of Physicians.

TELEPHONE No. 3402.

A SWEET ACID.—At the last meeting of the Franklin Institute a specimen of the sulphamide benzoic acid was exhibited, which was described as a coal-tar product. It is so sweet as to suggest the possibility at an early date of the displacing of the product of the cane by some rival from the laboratory of the chemist.

SUBSTITUTE FOR THE SAND-BATH.—From time immemorial chemists have used a sand-bath where a temperature is to be obtained higher than that of the boiling of water or of oil. The method is not wholly rational, however, sand being a very bad conductor of heat. Herr Kristalba has lately recommended the substitution of pounded fragments of graphite. They let the heat pass much better, do not oxidize, and do not soil the enclosing vessel. *L'Electricité* commends the method to electricians who have to make researches in thermo-electricity, adding that small shot of iron would serve nearly the same purpose. For more intense heats, it is known, melted lead can be used.

A WELCOME COMPLIMENT TO A PHILADELPHIA AUTHOR.—The popular treatise of Dr. Louis A. Duhring upon Diseases of the Skin has recently appeared in a French translation by Messrs. Barthélemy and Colson. M. Alfred Fournier has written a preface, and the translators have added notes.

THE PACIFIC MEDICAL COLLEGE has recently been re-incorporated under the name of the Cooper Medical College, as the result of a gift by Dr. L. C. Lane of a new building valued at one hundred thousand dollars. The school was asked by Dr. Lane to be called the Cooper Medical College, after Dr. E. S. Cooper, one of the fathers of medical education on the Western coast. The new school has adopted an obligatory three-years' course.

CHILBLAINS AND FROSTED FEET.—In the milder forms of frost-bite, carbolic acid in the form of wash or ointment is very useful; carbolized cosmoline is especially adapted for this purpose. In the more severe degrees, an army surgeon, in one of our exchanges, recommends pencilling with a solution of equal parts of nitrous acid and peppermint-water once or twice daily, which he had found very efficient for troops. A writer in the *Medical and Surgical Reporter* speaks with great confidence of applications of balsam of copaiva, which he claims, from experience, gives very prompt relief.

NOTES AND QUERIES.

EDITOR PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—I received a notice the other day from a druggist that hereafter all his preparations would be made of the standard strengths of the new Pharmacopœia. A leading druggist told me to-day that he intended, for some time at least, to adhere to the old standard,—that of 1870. You will naturally see by this that the same prescriptions sent to these two stores will receive a different interpretation, and as it is impossible for us to know what standard will be followed by *all* the drug-stores of the city, and equally impossible to compel all our patients to deal at particular stores, the physician's position becomes a difficult one. Will you kindly point out to me and others of your readers the proper course to follow? Are we to write the numerals 1870 or 1880 after each ingredient to our prescriptions hereafter?

Yours truly,

December 29, 1882. JOHN M. KEATING.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY FROM JANUARY 13 TO JANUARY 20, 1883.

No change.

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PHILADELPHIA, FEBRUARY 10, 1883.

ORIGINAL LECTURES.

CLINICAL LECTURE

ON HERPETIC TONSILLITIS: ITS RELATION TO DIPHTHERIA.

Delivered at the Hospital of the University of Pennsylvania, November 11, 1882,

BY WILLIAM PEPPER, M.D., LL.D.,

Professor of Clinical Medicine in the University of Pennsylvania.

Reported by WILLIAM H. MORRISON, M.D.

GENTLEMEN, — This young woman has been in the hospital for the past ten days, nursing her husband, who is here under treatment, and while suffering from some nervous prostration she has been suddenly seized with an affection which is so common, although not dangerous, that I desire to show her to you. She was a good deal run down when attacked, and has been quite busy, frequently up at night attending to her husband, but she has not been exposed to any septic influences whatever.

She began to complain two days ago of sore throat, difficulty in swallowing, and severe headache. There has been considerable fever; the temperature last night was 102°, to-day at 8.30 A.M. it was 101.4°; at present, 12.30 P.M., it is 101.8°. There is marked acceleration of pulse. It is now 114 in the minute, but this is partly due to the excitement of being brought before you. Last night there was a little wandering delirium, but this was very slight. There was some vomiting when she was first taken sick, but this soon subsided. There is some engorgement of the glands about the angles of the jaw.

Attacks of this kind are quite common both in children and in grown persons. In meeting a case like this, the first thing that you would do would be to examine the throat, and you will find it presenting various appearances. You may find a mild tonsillitis with some pharyngitis, the tonsils being enlarged, of a dark red color, and projecting toward the median line. Possibly there is some tenacious mucus upon their surface. The pharynx is red and swollen, and is perhaps covered by tenacious mucus; the uvula is enlarged, red, and œdematous. This constitutes a mild case of tonsillitis with erythematous inflammation of the mucous membrane of the uvula and pharynx. In this simple form there are no points of deposit, nor any white spots upon the tonsil.

Examining the throat in other cases, you find, with perhaps less redness and swelling of the pharynx, that the uvula is enlarged, red, and œdematous, and one or both tonsils are enlarged and reddened. You notice in addition that there are from one to a dozen white spots upon the tonsil, or upon the tonsils, as one or both are affected. These white spots are slightly prominent, rising above the surface of the tonsil. Touching them with a probe, you find that they are not free deposits, that they cannot be stripped off, but that they are beneath the mucous membrane, which is somewhat thickened. You recognize that they are the crypts of the tonsil distended with a clear or cheesy material. There is no true diphtheritic exudation upon the surface of the tonsils. There is a moderate amount of swelling of the glands at the angles of the jaw, but nothing like as great as occurs in a bad case of diphtheria with constitutional infection. The onset of this form of tonsillitis may be most violent. Not rarely, in children, I have seen it ushered in by a convulsion and such acceleration of pulse and heat of skin, which in connection with the sore throat has led me to expect an attack of scarlet fever. In adults this apparently trivial affection may be ushered in by marked chill, vomiting, high fever (a temperature of 104°), rapid pulse (115 per minute), headache, backache, pains in the limbs, intense soreness in the throat, and great difficulty in swallowing.

Not only do we find on the tonsil the white spots which I have mentioned, but I have repeatedly, both in the adult and in the child, but especially in the latter, after these spots had lasted for twenty-four hours, seen them run together and form an irregular white patch, which may be associated with membranous exudation upon the surface of the tonsils, so that in certain individuals this type of tonsillitis may be attended by membranous exudation. It is exceedingly difficult to say how this condition is to be distinguished from diphtheria. I am speaking of the affection which is called by various names, among which are herpetic tonsillitis, herpes of the tonsils, and diphtheritic sore throat (the name by

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which it is commonly known). It is also frequently called diphtheria.

In the present case there is no difficulty in making the diagnosis. The tonsils are enlarged, and present (the right one especially) a number of these white spots, which are clearly submucous. This woman has, then, a sharp attack of herpetic tonsillitis.

Let me describe an attack in which the symptoms were somewhat more severe, occurring in a little child whom I have had under observation for the past five years. When two and a half years old, while going through a somewhat severe dentition, she had what I am told was a bad attack of diphtheria. Since she has been under my care she has had perhaps twenty attacks of herpetic tonsillitis. The child lives under the best hygienic conditions which intelligence and money can secure. The attacks come on while the child is apparently well, and are attributable to overheating and taking cold. They come on whether the child is at the sea-shore, in the mountains, or at her city home. They are attended with sudden headache, backache, absolute loss of appetite, rarely vomiting, rapid swelling at the angle of the jaws, enlargement of the tonsils, frequent pulse (140 per minute), high temperature (frequently 103°), and a slight tendency to delirium. Almost immediately a membranous exudation forms on the tonsils, and beneath the mucous membrane are the white spots before described. This membrane can be removed from the tonsils, leaving the mucous membrane beneath not ulcerated. The crypts run together, forming a large white patch which may eventually break down, leaving an ulcerated surface. In other words, this little child has what must be regarded as a local diphtheritic affection. I am strongly opposed to the use of the words "diphtheria" and "diphtheritic" as applied to this form of tonsillitis. These terms are used by many who are ignorant and by many who are designing. There is, however, a great difference between this disease and diphtheria with constitutional infection, and yet it is very difficult to say where the line is to be drawn.

Let me give another illustration. A little child is taken ill with severe nasopharyngeal diphtheria, and dies within twenty-four hours in a state of putrescence. The mother, father, nurse, grandmother, and myself, who have been with the child, hanging over it, battling with the disease, get herpetic tonsillitis, with profound constitutional depression, from which it takes us some days to rally. I have had the same experience a number of times in my life after exposure to severe diphtheria. I was myself taken sick two days ago with herpetic tonsillitis. I had been obliged to be up late at night, but was feeling perfectly well, and was not conscious of being on the brink of any sickness. On Thursday I was taken with a slight creep, had fever, the tonsils became enlarged, presenting a number of white spots, twenty glands along the neck were swollen, and there was intense depression. Yesterday I was able to do a little work, and to-day the spots have disappeared.

What I wish to impress upon your minds is the difficulty of determining where we are to draw the line between this purely local affection of the throat and true diphtheria; that in certain individuals an attack apparently of this simple catarrhal character, unassociated with any septic influence, will be attended by a true membranous exudation, rendering it impossible by mere observation to distinguish the condition from true diphtheritic sore throat; that there is in such case a tendency to the absorption of some irritating matter, as is shown by the enlargement of the lymphatic glands, by the excessive prostration, and by the marked constitutional disturbance which attends it; and, finally, that in certain individuals the liability to the absorption of infectious matter is apparently so great that from a catarrhal inflammation of high degree, associated with membranous exudation, there is produced secondary poisoning of the system, thus giving rise to true diphtheria.

At this point the necessity for more minute investigation or sounder speculation becomes apparent. As you are aware, Professor H. C. Wood and Dr. Henry F. Formad have, with marvellous patience and extreme difficulty, established the fact that in true diphtheria a specific bacillus exists in the exudation in the throat, and so far as their investigations have gone, they render probable the supposition that constitutional diphtheria is due to the admittance of these bacilli into the blood and tissues, that the constitutional infection is inseparably connected with the saturation of the blood and tissues with the bacilli.

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Whether in cases where the disease becomes secondarily a constitutional affection there is in the primary exudation a specific bacillus, or whether there is in the individuals who are disposed to have this secondary poisoning some special anatomical peculiarity of the lymphatic glands enabling them more readily to absorb infectious matters, has not as yet been positively determined. I would direct your careful attention to this question, not only because it is one of great importance, but also because on the way in which it is settled will probably be found to depend the whole germ theory and the relations between grave septic processes to local infection, and particularly to specific bacilli.

My own opinion tends very strongly in the direction of a special vulnerability of the individual as exhibited either in a peculiar vital susceptibility to these infectious matters, or in an actual anatomical peculiarity which allows them to pass into the system, gaining there a foothold and developing some secondary process.

Do not imagine that I mean to say that diphtheria always begins as a local disease, which is followed by secondary poisoning. I am perfectly aware that it also begins as a primarily constitutional disease, the general symptoms appearing before the local lesions, and these latter need not be in the throat, but may involve other parts of the body; but I also believe most confidently, and I hold that recent investigations are demonstrating, that diphtheria may begin as a local affection involving chiefly the tonsils. In some individuals the disease may remain a local affection, a tonsillitis with membranous exudation, while in others the same disease may give rise to true diphtheria, either from the absorption of a specific bacillus, or, as I think more probable, from the presence of a peculiar vulnerability to septic infection.

Let me now consider the treatment of these cases. The patient should be confined to bed, but if you are confident that it is a purely local disease, or know from experience that there is no tendency to septic infection, you may allow a considerable latitude as regards motion. Patients may recover quickly even if not confined to bed. If there is high fever, the food should be light, as broths, arrow-root, milk, and wine-whey. As soon as the fever subsides, the patients should be given strong, nourishing food. They will bear champagne, claret-and-water, or whiskey, very well indeed. Counter-irritation should be employed, preferably by the application, two or three times a day, of iodine to both sides of the neck. The tonsils and throat should be touched every two hours with a mixture of

Tinctura ferri chloridi,
Aqua, equal parts,

or a saturated solution of chlorate of potassium may be substituted for the water. In the case of children there should be two parts of water or solution of potassium chlorate to one of the tincture of the chloride of iron. In the intervals the patient should frequently gargle the throat with a saturated solution of the chlorate of potassium.

Quinia, in doses of four grains every four hours, should be administered. Aconite should be given at the same time. The best plan is to give one drop in water every two hours until six drops are taken, and then suspend the remedy for twelve hours. I do not order aconite, even in one-drop doses, to be continued indefinitely. I always like to see patients who are taking aconite, at intervals of six or twelve hours. As soon as the fever is reduced, tincture of iron and chlorate of potassium may be combined with the quinia. Guaiacum has some specific virtue in tonsillitis, and should be given in the form of lozenges.

Under this plan of treatment a cure may confidently be promised in four or five days. The patient will be left weak, but will rapidly convalesce. After one attack he is exceedingly liable to similar attacks in the future. They are most common after exposure to some septic influence, but may occur from simple exposure to cold and damp.

This disease, from its serving to explain and illustrate other throat-troubles, from its frequency, from the violence of its constitutional symptoms, from the promptitude with which it yields to treatment, and from the amount of humbug which it gives rise to, should be thoroughly understood and promptly treated.

In the treatment of this affection I have recommended pretty strong doses and a good many of them, and I have spoken of the rapidity with which it yields to treatment; but I desire you to understand that cases will get well without active treatment, although it may take longer. But suppose that the disease occurs in one strongly dis-

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posed to the absorption of septic matter, or suppose the local disease should be followed by diphtheria; in such a case this active treatment would have been of the greatest benefit. I have never been able to reconcile myself to the propriety of trusting these cases to simple remedies: I always attack them vigorously and get them under control as quickly as possible.

ORIGINAL COMMUNICATIONS.

THE TREATMENT OF TYPHOID FEVER WITH IODO-PHENOL.

BY HUGO ENGEL, A.M., M.D.,
Fellow of the American Academy of Medicine, etc.

THE German physicians were the first to recommend, as an abortive treatment in typhoid fever, one or more large doses of calomel to be given in the earliest stages of this disease. There is no doubt that whenever, under such circumstances, large doses of the mild chloride of mercury (from eight to fifteen grains) are administered, a small part of it becomes changed in the alimentary canal into the bichloride. How are we otherwise to explain the well-known fact that occasionally such a dose of this mild mercurial preparation, even if a purgative is sent after it, is followed by grave salivation? The researches of Klebs, Koch, and others have undoubtedly proved that in enteric fever bacilli are present, and mainly at the seat of the morbid lesion, whether they be the real pathogenetic cause of the zymotic malady or not. Carefully-performed experiments have also established the bacillicidal properties of the bichloride of mercury; no cultures of germs are possible after the natural or artificial germs have been exposed to the action of a one-half per cent. solution of this drug. According to Klebs,* in the beginning of abdominal typhus the bacilli typhosi, following the law of gravity, and influenced by the temporary arrest of peristaltic motion at this locality, mainly accumulate, when they have been introduced into the human organism by food, in the lowest segment of the small intestines, near the ileo-cæcal valve, from where they migrate to other parts of the body. The mercurial preparation would come in such a case in direct contact with the germs, and, by either washing them away or making the greatest part of them innocuous, the disease naturally will run a milder and therefore a shorter course. That such is the case when typhoid fever attacks mainly the alimentary canal, and when the remedy is given early in the disease, cannot be denied.†

Iodine exerts a similar influence; and that here theory and practice harmonize, is seen from the fact that a case of typhoid fever, when treated with iodine, will run a far milder course, as regards the abdominal symptoms, than if not treated with this remedy.‡ That, in case this theory is correct, carbolic acid should induce a similar effect, can be guessed from its antiseptic properties. With the latter drug Rothe § has especially experimented, and the success he achieved with this remedy, and the long-established and well-earned reputation iodine has gained for itself in the treatment of typhoid fever, caused Dr. Klamann of Luckenwalde‖ to unite the two remedies, and under the name of iodophenol they are now made use of all over the continent of Europe, and are considered to form the most effective treatment in enteric fever so far known. As this disease may be said to be endemic in most parts of our country, I thought it best to make the readers of the *Medical Times* acquainted with this treatment, and, to give them as much information as possible regarding the same, I will in this article follow closely Dr. Klamann concerning his method and his experience with it. He mentions as the invariable effect of this remedy the following facts:

The discharges from the bowels always diminish in number and become more consistent, and in some cases, if the remedy is given very early in the disease, the latter will run its course totally without diarrhœa: constipation even will ensue, and this he says took place also when other cases, not treated with iodo-phenol, showed the type of the disease to be one associated with much diarrhœa.

The color of the passages soon assumes a more normal hue. The tongue loses its dryness and becomes moister. The thirst decidedly decreases. The appetite is re-

* Arch. für Experim. Physiol. und Pharmak., 1882, Heft III., IV.

† Ziemssen's Cyclop., Bd. II. Nothnagel, Berl. Klin. Wochenschrift, 1879, Nos. 41 and 42.

‡ Jürgenson, Deutsch. Mediz. Zeit., 1882, 49.

§ Rothe, Deutsche Med. Wochensch., 1880, 11 and 12. Conf. Memorabil., January, 1882.

‖ Allg. Med. Centr. Zeit. Klamann: Die Behandlung des Darm-typhus mit Iodphenol, October 11, 1882, No. 81.

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established; a longing for food, especially solid food (though it would not be wise to permit its being satisfied), is apparent much earlier in the disease, sometimes at the end of the first week,—a most remarkable phenomenon, as there is usually the strongest disgust for food of whatever nature.

In milder cases all febrile symptoms cease within a few days after the administration of the medicine has begun. In grave fatally-ending cases, a favorable influence of the remedy on the general symptoms and the general feeling of the patient cannot be denied, but it evidently does not prevent lung or heart complications, nor does it cause any alteration in them.*

Intestinal hemorrhage seems to be totally prevented by the medicine. Klamann noticed it only once among one hundred and ninety-six cases treated with iodophenol, and this happened during convalescence in a decrepit woman suffering from a tumor of the liver.

In grave cases which have progressed to a late stage, the remedy does not exert such a beneficial influence as when administered in the beginning of the disease.

Sometimes patients will have a disgust for the medicine, and cannot be induced to take it. In such a case it should be administered in some more palatable form, perhaps in gelatin capsules, which are easily dissolved in the stomach.

Occasionally the drug causes an increase in perspiration, but this is never the case to a great degree.

Being afraid of causing intoxication by larger doses of carbolic acid, Klamann administered the remedy in small and repeated doses only. The formula he employed was as follows:

℞ Tinct. iodini, o.5;
Acid. carbolic., gr. x;
Glycerin.,
Alcohol., āā, ♏ x.
M.—S.

Of this solution from five to ten drops were given in coffee or tea every hour to two hours.

As tannic acid has proved to be a very valuable remedy in the diarrhœa of typhoid fever, Klamann frequently added to this solution the tinctura ratanhæ. The latter exerts also a beneficial influence on the taste of the medicine.

* This agrees with what I said in the beginning, and shows the local action of the remedy.

Notwithstanding the fact that Klamann is rather sceptical concerning the so-called antiseptic treatment of typhoid fever, he was forced to the conclusion that iodophenol possesses a curative effect upon the morbid lesions caused by the poison of enteric fever; but this salutary influence seems to be limited to the intestinal affection, with which it comes into direct contact. A diminution in the swelling of the follicles, however, a healing of the ulcerations, and a decrease or cessation in the hyperæmia of the intestinal mucous membrane, will *eo ipso* have an antipyretic effect. Considering the great vitality of microzymes, I cannot believe that iodo-phenol has a really antizymotic, bacillicidal, disinfecting influence on the general system, at least in the doses given; its action is purely a local one, and therefore the greater the earlier in the disease it is administered.

Small and repeated doses are by all means to be preferred to larger ones more rarely given. That even the small doses exert an antipyretic effect Klamann noticed in all mild and also in graver cases which had progressed to some extent before the medicine could be administered. Especially in regard to carbolic acid, Klamann believes it to be well to follow the advice of the cautious physician: "Tantum me noceas, dum vis prodesse memento."

The following two cases will best instruct our readers regarding the administration and the action of the remedy. Both are reported by Klamann.†

Case I.—Ernestine Kühn, æt. 19, was forced to seek her bed August 24, 1881, having complained for about a week of pains in the extremities, the back, and the sides, and of being very thirsty. August 25, Klamann examined the patient, and found all the symptoms and signs of typhoid fever. In the forenoon the temperature in the armpit was 39.9° C., pulse 105, soft and compressible. There were present, besides, a dry tongue, meteorism, swelling of the spleen, roseolar eruption, diarrhœa, febrile urine, no albumen. Directed, three to four times daily, five to ten drops of the solution of iodo-phenol internally, and local application to the abdomen of flannel dipped in tepid water. August 29, four days later, constipation, pulse 88, temperature 38.8°. The margin of the tongue had become moist, and patient felt a desire for food. September 5, the tongue had a normal appearance, appetite was good, and in the

† Loc. cit., p. 1030.

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evening apyrexia was noticed. Within twelve days, therefore, all fever had ceased, notwithstanding that the treatment consisted only of iodo-phenol and tepid local applications. The case was not a spontaneous cure, as the patient expressed herself much better soon after commencement of the treatment, and, as she said herself, each dose of the remedy made her feel better in general.

In the same house another woman became sick with typhoid symptoms. Iodo-phenol was immediately administered, and within a few days the symptoms all ceased.

Case II.—Mrs. Kralisch, æt. 43, insisted that she had been suffering since February, 1880, principally with profuse perspiration. April 9 of the same year, she came under charge of Klamann, after she had been in a febrile condition for two weeks. On examination, the following was found: chronic bronchial catarrh, moderate enlargement of the spleen, mild meteorism, increased thirst, and diarrhœa. A few rose-colored spots were noticed on the abdomen, and, as the discharges had all the characteristic properties of those of abdominal typhus, the diagnosis of typhoid fever was made, and treatment accordingly instituted.

The patient was told to take five drops every two hours of the following solution,—acid. carbolic. solut.,* ℥ x, tincturæ iodini, 0.2, tincturæ ratanhæ 10.0,—and to confine herself to a fluid diet. April 6, at 5 P.M. the temperature in the armpit was 38.3°, the tongue had become moist and almost clean, perspiration very little, having decreased immediately after treatment commenced. Cough and bronchial catarrh had also decidedly decreased. Pulse 82; respiration undisturbed; constipation. Up to this day five grammes of the remedy had been used. On the 11th the fever had not totally disappeared as yet, but the tongue was perfectly normal and the appetite very good.

April 14, patient had left her bed; no fever, all symptoms disappeared, almost no bronchial catarrh, and, indeed, very good general health. The medicine had been renewed, but the second bottle was not as yet used one-half, so that during the whole course of the illness twenty drops carbol-glycerin, 0.4 tinctura iodini, and twenty grammes tinctura ratanhæ had been taken.

As no other remedy, no febrifuge, had been administered, Klamann believes that he had to ascribe the rapid improvement in the health of the patient to the favorable influence of the iodo-phenol. At the same time, he feels himself bound to state that another physician had told the patient that she was suffering from tubercular consumption and had to die: so that psychical influence might have had something to do with the rapid convalescence.

To this description of the method employed by Klamann in the treatment of typhoid fever we will add a few of his general remarks, which are very true and will be read with interest on this side of the Atlantic. He first speaks highly in favor of small—but by no means homœopathic—doses, frequently repeated, and says that in many cases we gain a far better effect from them than from large doses, which often only do injury to the stomach and frequently do not act, as on account of their size they cannot be absorbed. Further, we are able to make the treatment cheaper to the patient; and this is an object we never should lose sight of in our daily practice. Many physicians go on prescribing bulky bottles, and have no idea how large an apothecary's bill the patient sometimes has to pay. By following Klamann's advice, the sick will appreciate our endeavors in that direction.

In the German Medical Congress of last year, which was held in Wiesbaden, a physician expressed himself that most physicians at present make use of far more medication, febrifuges, and cold water than is good for the sick. Klamann is of the same opinion, and adds that, with the exception of cold water, we do not possess a single antipyretic remedy which is always reliable. And as regards the application of water, he says, with how many difficulties is this connected, and how rarely can it be employed *lege artis!* And as concerns quinine, he admits that in very large doses it will decrease the temperature, but he has yet to see the first case where such doses had really proved beneficial.

While by no means considering the treatment with iodo-phenol as the long-looked-for desideratum, he thinks that, if administered according to the manner described, this is the best remedy we possess at present for typhoid fever, as we can achieve more by its agency, and this with greater certainty, in a smaller quantity, and at much less cost, than with any other drug.

507 FRANKLIN STREET.

* Acid. carbolic., glycerin, *partes æquales.*

IT is stated that the French nation only began generally to use tobacco in 1830, and now spends nearly ninety millions of dollars a year on the Virginia plant.

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MINOR DYSPEPSIA.

Read before the Philadelphia County Medical Society, January 10, 1883,

BY WILLIAM R. D. BLACKWOOD, M.D.,

Neurologist and Electrician to the Presbyterian Hospital, Physician to St. Mary's Hospital, First Vice-President of the Society.

INDIGESTION is the bane of America, especially in the West and South, where gastronomics is a duty more than a pleasure, and where the main object of sitting at table appears to be divided between getting a full share of whatever is on hand (or more, if possible) and cultivating the art of deglutition at a rate so rapid as to make it almost a science. The peculiar attachment, amounting almost to reverence, for pork, corn, and salæratus, characteristic of the geographical region referred to has also a considerable bearing on the widespread dyspepsia of the citizens thereof; and, whilst the people of the Northern and Eastern States are not so gravely careless in these respects as their neighbors, they, too, frequently prostitute comfort and rational refreshment to suit the exigencies of business on every day except Sunday, and even then with very many the habit of hurried eating throughout the week begets a desire to leave the table as soon as may be, with the possible additional incentive that they may not be late at church.

The treatment of dyspepsia is frequently rendered difficult from the fact that the effort is usually directed to urge the action of the stomach alone, or that and the nearer large intestine, the prior mechanical treatment of the food, in both culinary preparation and mastication, being too often overlooked. A good cook is a *rara avis in terra*, and all of them—good, bad, or indifferent—are a terror in the kitchen to a mistress who proposes to invade their dominion, be she otherwise never so good-natured. The consequence is that they are, as a rule, left to their own devices, and, between rawness of the viands generally, frying instead of broiling, soda to make vegetables tender, an old penny in the pot to heighten the color of the greens, with other dodges known only to the initiated and kept religiously secret from their vulgar employers, we take things as we get them and are thankful. The family physician is rarely inquisitive enough to go into this phase of the matter, partly because he may be ignorant of the necessity for such investigation, and possibly for the reason that he knows how it is himself at home, and he accordingly despairs of originating a needed revolution.

If the defective preparation of the food as the first step be admitted as a cause of dyspepsia (and there is no doubt of this), as a second the hurried bolting of the meal so noticeable at table, before it is sufficiently masticated and insalivated, is also a factor of vital importance; for, although the stomach is an organ of wonderful patience, it breaks down after a time, for it is not anatomically or physiologically competent to do the work of the machinery preceding and succeeding it, and it would be just as sensible to hold the bolter in a mill responsible for refusing to break up half-ground grain into fine flour as to expect the gastric organ to liquefy the masses of gristle or pulverize the cubes of meat (not always the tenderest) and blocks of dry bread which pop into its cardiac extremity without the slightest warning. After much tribulation under such circumstances with the conglomerate mass to no purpose, it is obliged to reject it, either by emesis, or passing it on, bereft of thorough preparation, to its successor in action, the large intestine, whereupon the scene is re-enacted, the semi-digested mass irritating the bowel as it goes, and carrying before it as a sweeper some of the well-dissolved and matured chyle, and much of the epithelium of the tube it traverses. It is fortunate that the rectum is largely obtuse, for it is with dyspeptics obliged to accommodate not only the legitimate débris of the ingesta, but also particles of a solidity never designed to reach it. It is, of course, well known that digestion really begins in the mouth; and, this being so, it behooves us to see, in investigating a case, whether the teeth and salivary glands are competent to do their work. It is not only necessary that the teeth should be sound and strong, that they may cut, tear, and grind the material during insalivation, but I am convinced that carious dentine exerts a bad effect on food, and that a septic taint is frequently thus given to the bolus before swallowing, for "a little leaven leaveneth the whole lump," and a little tainted saliva in a delicate subject may, and no doubt does, impair not only thorough amylaceous digestion, but also leave its bad impress on each succeeding step throughout the intestinal tract. Highly-spiced food and immoderate draughts of water during eating

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also interfere with the due performance of the work which should be accomplished in the mouth, by diluting the saliva, reducing its alkalinity, and lessening the viscidity of the buccal mucus intended to coat the bolus so that deglutition shall be easily accomplished. A third step in imperfect digestion arises in the stomach itself, through impaired function. True, gastric indigestion is usually associated with depressed general health,—the so-called atonic dyspepsia, the main difficulty being simple loss of power through defective innervation; but serious derangement of the organ may result from chronic congestion resultant from the habitual use of alcohol in persons whose general condition is as yet apparently perfect.

In all large cities this is a common variety, especially with men about the prime of life who are additionally slaves to tobacco. The hyperæmia of the mucous membrane prevents free action of the gastric follicles: hence the gastric juice is less abundantly poured out, and, as this fluid is largely laden with pepsin, whose action is to complete the formation of chyme, the result of perfect digestion of the albuminoids, and as seventy ounces or thereabout of the fluid in question is required daily, any material hinderance in this direction must be a matter of moment. Failure of the food to undergo thorough solution in the stomach begets a tendency to flatulence in many people, and, as this malady is most frequently met with in persons addicted to the pleasures of the table, it becomes at times extremely unpleasant, for during a long session at the festive board borborygmus generally announces itself unsought and precipitately, being apt to originate through mental emotion, as, for instance, at the conclusion of a speech, a song, or other music, when sympathy for the performer (especially if he be the victim himself) causes "the bowels to yearn," as the old phrase goes, a proceeding more physiological than elegant, particularly if good peristaltic action carries the wind in a normally downward course, when nothing short of the most violent effort will restrain it within bounds.

Generally speaking, stomach-digestion is chiefly histogenetic or nitrogenized, and it is, therefore, important that it should be well performed, otherwise nutrition suffers. It is because of this failure that confirmed dyspeptics are so lank and limber-looking. People who will drink wine habitually at dinner should therefore dilute it thoroughly, preferably with a mildly alkaline mineral water, as Vichy, seltzer, or one of those so readily found in our home springs; and alcohol thus diluted is less apt to disagree if taken as near the close of the meal as possible, because the stomach has had a short time at least to work without the gastric juice losing its pepsin through precipitation by undiluted alcohol, and so much chyme as may have passed the stomach to take its place with the carbo-hydrates about to undergo calorifacient or intestinal digestion is, of course, available as nutritive material.

The fourth point involved in dyspepsia is from defective duodenal digestion; and here several agencies may be at fault. As with the stomach, the intestinal glands may be inactive, and the pancreas may be sluggish; but by far the most common defect is a perverted state of the hepatic function, for although the bile secreted by the liver does not in itself exert much, if any, effect in the direct digestion of either nitrogenized or amylaceous food, a congested state of the organ obstructs the active flow necessary during digestion in the entire gastro-intestinal circulation. Here, again, alcohol interferes indirectly with intestinal digestion, as it did directly with the gastric function, by neutralizing the action of pancreatine upon the contained mass, and thus not only interfering with saponification of the fat and oils, but preventing the amylaceous bodies which had escaped buccal or salivary action from an opportunity for solution by the once again alkaline action to which they are here subjected.

Beyond the duodenum we are not concerned in our consideration of the minor dyspeptic ailments. Of course the chyle as it flows onward is subjected to digestive action after leaving the superior intestinal tract, but it is chiefly through what has been done already, and from continued action of the gastric and particularly the pancreatic fluids therein contained. Absorption is now the main point, and this is not much interfered with even in confirmed dyspeptics below the large intestine.

Time will admit but little reference to treatment, and in all forms of indigestion prevention is better than cure. Besides attention to proper preparation of food, regularity in eating, moderation in amount,

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adaptation of diet to personal peculiarities, and avoidance of immoderate indulgence in stimulants, the dinner especially should be deferred till after the close of the day's business, rather than eaten hurriedly, a simple glass of milk with a biscuit being taken at mid-day instead of the usual leather pie and beer or whiskey, and the cheerful presence of the family circle in the evening around the table will go far towards making enjoyable to many a hard workman what is too often otherwise a mere mechanical business at noon.

The indiscriminate use of bitters, cordials, and the like is indefensible on rational grounds; and the great majority of the artificially-prepared pepsins and pancreatines are utterly useless, as in the condition usually found they are saccharated (or adulterated with milk-sugar) to an extent unknown by the physician, and, despite the laudatory effusions so readily obtained by any and every manufacturer from regular, irregular, and defective doctors, professors, secretaries, ministers, and members of Congress, in the vast majority of dyspepsias these compounds are utterly inert. If you want pepsin, give IT, and omit the lactose; and the same with pancreatine. Bismuth, also, has been blindly handled, especially in combination with pepsin, whose action it neutralizes. Whilst of undoubted service at first in acidity of the stomach, it eventually lines more or less the intestinal tract with an impervious coating, seriously hindering the production of the mucous and follicular secretions. The nitro-muriatic and phosphoric acids are much better, and, if urgent need prevails, the administration of a soda or potassa salt for a short time will do much more service than either the subnitrate or the subcarbonate of bismuth. In all forms of dyspepsia strychnia or nux vomica is extremely valuable; and where acidity or constipation is present, very small doses of belladonna, with at times cascara sagrada, will remove the difficulty.

Regular exercise, especially equestrianism, is very efficient in atonic conditions, and, where this cannot be had, walking, together with abdominal massage, is good. General faradization of the abdomen is an admirable method of toning up the peristaltic action, particularly in constipated patients; whilst galvanism is unusually efficient in hepatic torpor, and static electricity in my hands has acted promptly, thoroughly, and permanently in relieving the dyspepsia so common in nervous, hysterical school-girls. Where liver-congestion exists to a decided degree, the employment of mercurials, such as calomel, blue mass, or hydrarg. cum creta, is better avoided, because of their blood-defibrinizing quality, and recourse should be had to one or more of the efficient agents long used by the eclectic fraternity and lately investigated in a series of exhaustive experiments by Rutherford and others. Of these, podophyllin, irisin, and euonymin are the most valuable; but I am in the habit of combining them with very felicitous results, and at the risk of being criticised I annex a favorite formula used for many years, and it is, I may say, the only one approaching the so-called "shot-gun" prescription which I ever use, my habit otherwise being to order simply one ingredient, or at the most, and that rarely, three, in any one recipe. It is as follows, and I prefer Keith's *freshly-prepared* manufacture:

℞ Cinchonidiæ sulphatis,
Euonymin.,
Irisin.,
Leptandrin.,
Juglandin., āā, ʒss;
Podophyllin.,
Ext. belladonnæ,
Ext. nucis vomicæ,
Ext. hyoscyami, āā, gr. x.
M. In pil. no. 60 div.
Sig. One or two at bedtime.

Many a stubborn case of dyspepsia that had run the gauntlet unavailingly of all sorts of peptonoids has given way to this, and it is an admirable cholagogue on general principles. In scrofulous subjects with deficient nutrition I have had much benefit from minute doses of mercuric bichloride (the one-hundredth of a grain) in tinct. calumbæ comp., the dose being a drachm of the latter thrice daily. Within a few weeks a most interesting case, treated by several physicians for organic cardiac lesion, has recovered under the remedies just alluded to. The palpitation, the supposed dilatation with compensating hypertrophy according to canonical dicta, has subsided; the patient can lie down, and sleep too when recumbent; he has no night tremor or dread; he can run up-stairs or after a car; he can eat, drink, and be merry now, whereas before he was morose, taciturn, and a family nuisance; in short, he has dropped a minor dyspepsia, and with it a

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prognosed incurable heart-trouble. Dyspepsia, like charity, covers a multitude of troubles and sins, and a good deal of the "malaria" so fashionable with the fraternity and with the laity also is one or another form of indigestion.

I must apologize for the incompleteness of this paper, which was written hurriedly to fill a sudden gap in our promised series, but I hope it will by its very meagreness draw out, now or in the future, something of value from some of our friends present who are much more capable than myself of doing the subject justice.

246 NORTH TWENTIETH STREET.

SOME CASES OF PNEUMONIA IN THE ADULT SIMULATING MENINGITIS.

Read before the Philadelphia County Medical Society, January 10, 1883,

BY J. T. ESKRIDGE, M.D.,
Physician to the St. Mary's and Howard Hospitals.

THE chief symptoms in the following cases of pneumonia pointed to the brain, instead of the lungs, as being the main organ diseased.

I desire to express my indebtedness to my friend Dr. O'Hara for permission to use in this paper the notes taken on a case of pneumonia under his care, occurring during his recent term of service at the St. Mary's Hospital.

Case I.—James F., æt. 37 years, Irishman, laborer; enjoyed good health until about the 1st of July, 1882, when a diarrhœa, from which he suffered until his death, began. The latter part of July he was accidentally struck over the right eye with a large piece of coal. The bone was laid bare, but apparently not broken. The wound soon healed kindly, and he was not confined to his room more than three or four days. Feeling weak from the continued diarrhœa, he stopped work August 6, and the next day went to Atlantic City, where he stayed about forty-eight hours. August 14 he became very delirious, and suffered from high fever. Two days later (August 16) he was brought to the St. Mary's Hospital at 9 A.M. Temperature 104°; pulse 130; respirations 40. He was unconscious. The delirium at that time was violent, and two attendants were required to hold him in bed.

At 12 M., being engaged in another ward of the hospital, I was asked by Dr. Everett, the resident physician, to see the patient, as Dr. O'Hara, the attending physician then on duty, had not arrived. I found the temperature 104.8°; pulse 140; respirations 48, blowing, and semi-stertorous. The pupils were widely dilated, the eyes staring and rolling from side to side. A cicatrix about one and a half inches long, stained black by coal-dust, in which he was working when he received the wound, was noticed over the right orbit, but the external table of the bone did not seem to be depressed. The arms were rigid and at times affected by tetanic convulsive movements. Occasionally he would become markedly opisthotonic. All the muscles of his body seemed to be in a constant tremor. He would lie a few minutes without making any effort to rise, but in an instant he would make a quick and violent plunge, several times nearly succeeding in freeing himself from those who struggled to hold him in bed. So violent and explosive were his movements that I did not care to risk my head near enough to him to enable me to examine his heart or lungs. He was insensible, and did not wince when his flesh was deeply pierced by a needle. When spoken to, he endeavored to speak, but his answers were unintelligible. No muscles were paralyzed. About that time Dr. O'Hara arrived. We were of the opinion that his trouble was some brain-lesion, probably meningitis. As he appeared to be sinking and death imminent, we decided to stimulate by means of brandy, ammonia, digitalis, and belladonna, administered, if necessary, hypodermically.

He died about 1.30 P.M., one hour after we left him.

On account of the recent injury above the eye, and because death resulted so soon after his admission, while brain-symptoms were so prominent, and before a satisfactory diagnosis was made, the case was reported to the coroner. He, however, courteously permitted the post-mortem examination to be made by the physicians connected with the hospital.

Sectio cadaveris was made twenty hours after death by Dr. Everett and myself, in presence of Drs. O'Hara and Moyland. Body considerably emaciated.

Brain.—The membranes were congested, the blood-vessels being highly engorged with dark venous blood. The dura mater was abnormally adherent to the skull-cap, but no decided evidences of recent inflammation were seen. One or two ounces of serous fluid at the base of the brain were found. The ganglia and brain-substance were nearly normal.

Thorax.—The heart and pericardium showed no signs of disease, except that the right ventricle contained a good-sized antemortem clot. A few pleuritic adhesions, recent and old, existed at the base of each lung. The entire right lung was consolidated. Sections discovered several small points of suppuration in the lung. The left lung was nearly normal.

Abdominal Cavity.—The peritoneum was hyperæmic, but no lymph or adhesions were

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found. The bowels contained considerable fluid fecal matter. The mucous membrane of the small and large intestines, more especially of the ileum and colon, was congested. Peyer's patches and the solitary glands were not prominently involved. The mesenteric glands were a little enlarged, but not much injected. The liver, spleen, and kidneys seemed to be passively congested.

Case II.—During October, 1882, I was called to visit Peter R., 45 years old. He was a laborer, and addicted to drink. I could obtain no further history than that a few days before he had been attacked by a severe fever and soon became delirious. A physician who had recommended his removal to an asylum had seen him a number of times.

I first saw the patient at 11 A.M. His hands and feet were cool; pulse weak, rapid, and almost imperceptible; respirations short, and 60 per minute; temperature 103°. No paralysis or spasmodic movements of any of his muscles observed. His pupils were nearly normal. When food and drink were offered him, he clinched his teeth and refused to take either. Pinching and pricking his flesh gave him no annoyance. He was tied in bed, his friends stating that it had been almost impossible to prevent him injuring himself and attendants. When I saw him, his delirium was low and muttering most of the time, but at times he became noisy. The heart, free from murmurs, was weak, the first sound being almost imperceptible. The right lung was solid from base to apex; the left overacting, presented no other evidence of disease. Stimulating enemata were recommended.

6 P.M.—He was in a moribund condition, and died at 8 P.M. No post-mortem examination was obtained.

Remarks. — Pneumonia in children is frequently so marked by brain-symptoms that unless one is on his guard he may entirely overlook the real seat of trouble. Such a deceptive train of symptoms as found in the cases I have reported to-night are rare in the adult, but that such occur is demonstrated, and the fact should make us most careful and searching in our examinations, not only before an opinion is given, but before a line of treatment is entered upon. We cannqt be sure of a diagnosis until every organ is investigated.

The symptoms are not difficult to acconnt for when we remember the condition of the brain exhibited at the autopsy in Case I. It is well to bear in mind that both patients were addicted to alcoholic stimulus, and that the first had suffered from an exhaustive diarrhœa during the six weeks prior to being seized by pneumonia. Only an imperfect history of Case II. could be obtained. He had lost considerable flesh, although he had been sick from the lung-trouble only a few days. It is probable, therefore, that he also had previously suffered from a drain on his system, rendering him more liable to diffuse inflammation of low type, his habit of spirit-drinking making the membranes of the brain irritable and easily violently congested. It is a well-known fact that when the apex of the lung is involved in pneumonic inflammation brain-disturbance is common, but of course rarely so marked as was witnessed in the cases reported in this paper.

The physical signs make an accurate diagnosis easy, and we have in these cases but to remember the danger of mistake to avoid it.

POISONING BY MUSHROOMS.

Read before the Philadelphia County Medical Society, January 10, 1883,

BY HORACE Y. EVANS, M.D.

THE mushroom is a fungus so familiar to us all that I must ask pardon for referring, even very briefly, to its botanical associations. It is proposed to call your attention first to the edible and innoxious variety, and subsequently to the poisonous ones, with a brief report of two cases in which the noxious effect of their consumption was manifested.

The *Agaricus campestris*, the *Tuber cibarium*, and the *Morchella esculenta* are fungi, indigenous to almost every land in which the climate can even for a short period be called temperate.

They grow from the spore, rarely prospering in any but moist soil. Those who cultivate them for market have found that they prosper best in a soil rich in sulphate of calcium.

Analysis reveals the constituents of these edible species to be fungic acid, fungin or cellulose, salts of potash, saccharine matter, and albumen.

The *Agaricus campestris pilei*, though the safest and best of the class for the table, are yet at times objectionable, owing to the irritation and pain following their consumption. When gathered too early or too late, or when growing in a too moist soil, they will often manifest their innate noxious tendency. Hence the propriety of our ever consenting to their employment as food becomes very doubtful. As a rule,

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the skilled cultivator can detect the poisonous variety, but the fact that even the innoxious at certain times and under certain circumstances become poisonous (Reese's "Toxicology") shows that even the expert cannot at all times guarantee immunity to the consumer. The absence of the pink or purple color in the gills of the fungi should at once condemn them as certainly poisonous.

The conspicuously noxious species are the *Amanita muscari* and the *Amanita venanta*. They have a narcotic fetid odor, an acrid, bitter, and acid taste, are corky to the feel, and exude a milky, acrid, and styptic juice. When bruised they assume a bluish tint. The cap has a conical or flattened shape; their color varies from yellow, brown, green, and red, to yellow or orange.

In the usual process of cooking (namely, incomplete boiling, and the utilizing of the fluid in which they are cooked as a constituent of the dressing or dip), the poison becomes more active than when they are eaten in the uncooked state.

The safest manner of preparing the mushrooms for the table is to soak them for several hours in strong salt water, then rinse them in fresh water and boil them rapidly for a short time; again remove them from the water, and cook them in milk and whatever *etceteras* the taste may dictate.

My experience in poisoning by the noxious varieties is confined to two cases. In both instances the subjects were young ladies. They had eaten them in the uncooked condition and on empty stomachs.

After four hours the individuals became dizzy, with the sensation of constriction in the head and abdomen, vertigo, with a staggering gait, dryness of the fauces, a rapid and full pulse, with elevated temperature. These symptoms were within two hours succeeded by a wild and apprehensive delirium.

Active emetics, followed by cathartics (in one instance four ounces of castor oil were administered at a dose), very soon removed the offending cause. The internal use of ether at first palliated, and within three hours subdued, all the threatening symptoms.

These were typical cases of the first stage of poisoning by toadstools. Had not the condition been recognized and the treatment promptly resorted to, the subsequent and more serious train of symptoms usual in these cases would in all probability have followed.

The treatment consisted of mustard infusion and sulphate of zinc as emetics, followed by prompt yet non-irritating cathartics. Nothing seemed to act so quickly in subduing the excitement as ether.

CASES OF ACONITE-POISONING.

BY P. HOOPER, A.M., M.D.

I WAS summoned, on the evening of December 23, 1882, at 10.45 P.M., to "come immediately to see a woman who was nearly dead in a drug-store." I went at once, and found I had two patients instead of one to treat,—the woman, Mrs. D., whom I was called to see, and the druggist. My lady patient I found perfectly conscious. She gave me a history of the case, as follows:

"Doctor, am I going to die? Taste what I have taken,—there it is on the table,—and tell me. I never had such feelings in my life: my flesh is tingling from head to foot. This evening I bought at this store what I have been accustomed to take for biliousness and indigestion,—a package of dandelion root. I steeped the root in a pint of warm water, and drank about two-thirds of a gobletful. In about three minutes I felt a terrible pricking and tingling feeling in my tongue and lips, soon afterwards in my arms, and then from head to foot. I asked my husband to taste it; he did so, but, becoming alarmed, he vomited, which he can do very readily, very soon after drinking it. My husband's brother also drank a little of it. My husband and I started at once for the store with the remainder of the decoction. The druggist assured me that it was dandelion root, and to satisfy me drank some of it. He drank the greater part of the decoction remaining in the glass jar which I brought with me. Very soon after he had taken the second drink, he gave me an emetic and took one himself. He repeated the dose of the emetic for us both, and said, 'You must have a doctor called immediately.' The emetic has not acted in my case, for it is difficult for me to vomit."

While she was telling me this, I had taken a very little of the decoction (about a quarter of a teaspoonful), and almost as

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soon as it had touched my lips my tongue began to tingle, and I had no difficulty in making a diagnosis of *aconite-poisoning*. I ordered a heaping tablespoonful of mustard in a glass of water. This Mrs. D. drank. After she had swallowed the last of it, and still did not vomit, I told her to run her fingers as far down her throat as possible. This brought on violent retching, but very little of the stomach's contents were vomited. I felt for her pulse, but it was imperceptible. I asked her to stand on her feet; she said she felt as if she were paralyzed and could not do it. I helped her to her feet, but she could not stand, for every muscle and fibre of her system seemed to be vibrating. I urged her to keep her fingers down her throat, and soon I was rewarded for my exertions by her vomiting quite freely. I looked at the eyes, and found the pupils dilated. Very soon purging set in, and she had one free movement of the bowels. After this I placed her on the sofa, and told her to keep perfectly quiet. I again felt for the radial pulsations, and found the pulse still imperceptible. My patient was constantly quivering from head to foot. Knowing that any other kind of treatment than the heroic is folly in desperate cases, I called for tincture of digitalis, intending to use it as the physiological antidote. Not having my hypodermic syringe with me, I gave a drachm dose by the mouth. I told Mrs. D. that she must be put to bed and kept absolutely quiet; that she must lean on my arm, and I would support her to a bedroom. For several moments the fear of death seemed to be driving her almost wild. The dread of death, which, she said, was the only thing in the world she feared, seemed to come sweeping over her like the surging waves of the sea.

She leaned heavily upon my arm while I supported her to a bed. I had her placed on it, keeping her head lower than her feet. She complained of some nausea, but, by keeping her in the position I have described, the feeling soon passed away. I now continued the administration of tincture of digitalis, giving her a drachm dose one half-hour, and a half-drachm dose the next half-hour. After she had vomited a great deal, and before I had given the second dose of digitalis, there was considerable muscular relaxation, and I felt her pulse, but it was very feeble, and ranging from thirty to forty beats per minute, sometimes beating slower and sometimes faster, and at times it was intermittent. Within half an hour after giving the digitalis I felt an improvement in the pulse, yet it was two hours and a half before the physiological antidote began to act as I wished it to. After five hours I considered the greater part of the danger past. Between 2.30 A.M. and 3 A.M. she complained of her arms and legs feeling numb. I ordered them to be rubbed briskly, and assisted myself. At 4 A.M. her pulse was full and strong, yet she was still nervous. I assured her that she would recover. She now, for the first time, seemed to place entire confidence in me, and to implicitly believe my word.

About 1 A.M. several of Mrs. D.'s friends came in, and said that her brother-in-law was complaining greatly of the tingling feeling also. I judged that he had taken only a small quantity of the deadly decoction, and, as they did not bring him to me, I had to tell them how to treat him when they reached home. I ordered the same treatment, with the exception of the digitalis, which I did not think needed to be used in his case on account of the small amount he had taken, and I also had some doubts about the propriety of trusting the administration of digitalis to unprofessional hands. In his case I ordered stimulants. I had also given Mrs. D. alcoholic stimulants between the times of the exhibition of digitalis.

During the time I was attending Mrs. D., I stole away from time to time to see my druggist-patient. He had vomited very freely before I came to him: so in his case no emetic was needed. I had him also taken to his bed. The pulse ranged thirty-three, and sometimes thirty-seven and forty, per minute. His respirations were long and labored. His head was kept lower than his feet, and he was kept on his back. Before I supported him to his room I whispered in his ear, "This is aconite-poisoning." He nodded his head, but seemed unable to converse much. I commenced giving him digitalis in the same doses and with the same frequency that Mrs. D. had taken it. In one hour's time the pulse ranged from fifty to sixty beats per minute, but was very feeble and intermittent. At times he complained of a suffocating feeling in his throat, for it was there the poison seemed to act most powerfully. He also felt the tingling feeling from head to foot, and

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occasionally a cold chill, almost like the chill of death, would run over his body. He said his tongue felt so swollen and tingling that he did not care for brandy, after I had given him an ounce of it. Back and forward I went to my two patients, spending, however, most of my time with Mrs. D., for she did not wish me to be absent often, or long at a time. I gave the druggist six drachms of the digitalis. Before I had given him his last half-drachm dose his pulse was full and strong, and soon after the last dose was taken he had a digitalis pulse. On examining his eyes I found the pupils dilated.

Mr. D., who was with his wife most of the evening, also felt the tingling through his tongue and lips, but he had not taken enough to need any treatment. I stayed with my patients until 7 A.M. Sunday morning, December 24. I made three visits to Mrs. D. after she was taken to her home. The after-treatment was only demulcent drinks to allay the irritation of the stomach which she complained of. The druggist on Christmas day was able to attend to business. He told me he sold Mrs. D. an ounce of the aconite root, and gave her two ounces of antimonial wine (he first gave one ounce, and then in a few moments gave the second ounce) for an emetic, and that he took the same. He said that he felt the tingling almost as soon as he had taken the decoction of the root, and, if he had not sent for me very soon after Mrs. D. entered, he would not have been able to, for he was very soon prostrated, so quickly did it act in his case. He also said that he felt better very soon after taking the digitalis; that it relieved the oppressed feeling he had. To my mind, the cases prove that digitalis is a valuable physiological antidote in aconite-poisoning.

COFFEE AS AN ANTIDOTE TO ALCOHOLISM.

BY F. P. NOVAES,
Rio de Janeiro.

THE habitual use of coffee (*Caffea Arabica*) has been considered by some writers to be antidotal to alcoholism, and some of them apparently have no doubts on the subject.

One of the gravest questions discussed in the Congress of Geneva was that of alcoholism, and the means of fighting this terrible scourge, which from day to day makes such frightful progress in Europe, particularly in Switzerland.

His excellency the Baron of Theresopolis, vice-director of the faculty of medicine of Rio de Janeiro, in some remarks made during the discussion of this topic, interested his audience and indicated the means he believed most efficacious to oppose the inroads of alcoholism. He produced statistics showing that the number of drunkards in a country is in inverse ratio to the amount of coffee consumed.

"In Brazil," he said, "where great quantities of coffee are used, and where all the inhabitants take it many times a day, alcoholism is completely unknown. It appears that the immigrants arriving in our country with this terrible passion for alcohol contract little by little the habits of our people, imitating their fondness for drinking coffee, and their aversion for liquors. The children of these immigrants, brought up with coffee from their tender age, never contract the fatal habits of their parents.

"We can, therefore, conclude that the more coffee we take the less desire for alcohol we have. But to obtain such a result it is necessary that the coffee should be of superior quality, such as that from Brazil.

"Send us your emigrants," said the baron; "we have work for them, and they will live under the protection of our government. In turn we will send you our coffee, which is the best remedy for such a trouble as this which you consider incurable."

His excellency may have exaggerated in this estimation of the effects of coffee, but we do not doubt that its use is an excellent antidote to alcoholism. The number of *cafés* in the large cities of Brazil, where hundreds of persons, from the highest down to the lowest classes of people, go in to take a cup of that delicious beverage, which none but Brazilians know how to make properly, is enormous, whilst drinking-saloons or bars are very few, and their patrons fewer still, in consequence of which a public drunkard is a rare person to be seen.

TREATMENT OF ACUTE PNEUMONIA.—Remarkable results are reported by Riebeau-Schwartz from the use of iodide of potassium internally, and ice externally, in acute pneumonia.—*Paris Méd.*, 1882, p. 116.

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NOTES OF HOSPITAL PRACTICE.

PENNSYLVANIA HOSPITAL.

CRUSH OF LEGS—AMPUTATION—RE-AMPUTATION.

Communicated by HENRY M. WETHERILL, M.D., formerly Resident Physician in the Department for the Sick.

UPON the twenty-first day of August, 1880, M. S., æt. 6 years, a schoolboy, was carried into the surgical ward of the Pennsylvania Hospital, he having been knocked down and run over a few minutes previously by a horse-car at Sixth and Lombard Streets. The wheels had passed over both legs at a point a little above their middle, completely crushing through the soft parts and bones, the parts hanging merely by a few tendons. He had lost much blood, and was bleeding pretty freely from the right stump, when admitted. The shock was profound. Ligatures were applied to the bleeding vessels. Temperature 97° F. External warmth and stimuli brought about fair reaction in about three hours, when he was carefully etherized and his injuries examined.

The skin and muscles of the calves were found to be very much bruised and loosened up above the seat of injury. The tourniquet was then applied over the femoral vessel of the left thigh, and Dr. Elliott Richardson amputated through the left knee-joint, making a long anterior cutaneous flap, including the patella, and leaving in the semilunar cartilages, and making a short musculo-cutaneous posterior flap. The anterior flap at its margin below was somewhat bruised. Five vessels were ligated with silk, and the margins of the wound rather loosely approximated with silver wire. Meanwhile, the boy had almost died upon the table, and brandy and ammonia were given freely, which he fortunately retained, and, his condition presently improving, the writer, by the kind permission and with the assistance of Dr. Richardson, amputated through the right knee-joint by the same method, except that the semilunar cartilages were removed. The margins of both these flaps involved some of the bruised integument. Six vessels were tied with silk, and the edges of the flaps were rather loosely approximated with silver wire, on account of the bruised condition of their margins. Both stumps dressed with adhesive plaster and carbolized lint.

Upon August 25 it is noted that the margins of the anterior flaps are sloughing, especially that of the right stump. Temperature 101°, pulse 104, respiration 26.

In a few days the entire covering of the end of the right stump had sloughed away, leaving a granulating surface bathed in healthy pus and exposing the knots of the ligatures. The left stump is in rather better condition; but the anterior flap has sloughed away in part, exposing a granulating surface which could be about covered by a silver quarter of a dollar. His general condition is bad. He has traumatic delirium. Pulse 120, temperature 103.5°, respiration 30. The note for September 30 says that the boy has weathered through severe surgical fever and delirium and is in good general condition. All ligatures away.

The left stump is slowly closing by granulation, the uncovered portion having been planted with skin-grafts from his own arm. The end of the right stump is an open ulcer, showing not a vestige of flaps. In appearance this ulcer is healthy, but skin-grafts will not grow upon it, although tried repeatedly, both with his own skin and with that of others.

The boy remained in the hospital, improving very much in general condition, preparatory to a re-amputation of the right stump, which was done by Dr. Thomas G. Morton on October 23, at the lower third of the thigh.

He made a very good recovery from this successful re-amputation, and was discharged from the hospital, cured, on January 8, 1881, after a residence there of one hundred and forty days, during which he successfully stood the primary shock following the injury, the shock of double amputation through the knee-joints, followed by extensive sloughing, a high condition of surgical fever, exhausting suppuration, the re-amputation, with more shock, and subsequent drainage. When he left the hospital he weighed about the same as when he was admitted,—which shows a very decided gain, when it is considered how much of his original frame he left there.

I have had this boy under my observation from time to time ever since. He is very stout and active. He does not yet use artificial limbs, and he has wonderfully developed his arms by making them do double duty.

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TRANSLATIONS.

PYO-NEPHROSIS AND ITS SURGICAL TREATMENT.—A strong, well-developed woman, 32 years of age, who had a history of some obscure painful affection of the left kidney, but with excellent general health, was seized suddenly with fever, intermittent in type, restlessness, and severe pains in the left lumbar region. After she had suffered thus for a month, ether was administered, and by physical examination a large tumor was detected in this region, extending from the ribs to the crest of the ilium and pubes, and beyond the median line; it was oval in shape, and in the centre fluctuating. The heart was not hypertrophied. The urine was large in quantity, and contained pus and albumen; it was alkaline, and had an offensive odor. Dr. James Israel, who reports the case in the *Berliner Klinische Wochenschrift* (No. 51, 1882), diagnosticated pyo-nephrosis, and proposed a permanent fistule through the abdominal wall as a *dernier ressort*,—an operation which was subsequently performed. It was found to be cystic dilatation of the calices of the kidney. Upon opening the peritoneal cavity, a trocar was introduced into the point of greatest fluctuation, and a large quantity of offensive purulent fluid was obtained. A drainage-tube was inserted, and iodoform gauze applied over the wound. Everything progressed remarkably well after the operation; there was no fever, no peritonitis, no pain, and the urine had become clear and acid in reaction, when, on the third day (following a hypodermic injection of morphia), uræmia set in, and the patient perished. At the autopsy, the left kidney was diseased, as stated, and the other kidney was found to be very much contracted, and the site of granular atrophy. The existence of disease of the right kidney had not been suspected during life; the normal quantity of the urine, the absence of cardiac hypertrophy, and the appearance of robust health and unimpaired nourishment of the patient were all against this supposition. The bearing of this upon the question of total extirpation of a diseased kidney in such cases is very obvious. The reporter formulates the practical deductions from this interesting case in the following observations:

1. The diagnosis of unilateral hydro- or pyo-nephrosis having been made, the possibility of disease in the other kidney—even in the absence of cardiac hypertrophy, and in the presence of the normal excretion of the normal quantity of urine—must always be acknowledged.

2. Therefore the establishment of a fistulous opening into the pelvis of the diseased kidney through the abdominal wall is, as a rule, to be preferred to the operation of extirpation of the affected organ.

3. Where the cystic enlargement of the calices is more extensive than the distention of the pelvis of the kidney, aspiration can still be performed, either with or without preliminary incision into the abdominal wall.

4. The use of narcotics, which reduce the power of the heart, should be restricted as much as practicable in kidney-diseases, which cause considerable disturbance in the circulation.

RAPIDLY-DEVELOPING AND CURABLE GENERAL SPINAL PARALYSIS.—Landouzy and Dejérine report in detail two cases of non-inflammatory rapid general paralysis of spinal origin in the *Revue de Médecine*, (Nos. 11 and 12, 1882), and give a critical review of the literature of the subject, discussing our present knowledge of the pathology, symptomatology, and treatment of these affections. The treatment should be general and local, sustaining the strength by all possible means, and especially by tonics and hydrotherapy, the tendency being towards final recovery. This result may be accelerated by electricity, the nutrition of the muscles being maintained by faradic currents, and the galvanic current of feeble intensity being applied to the vertebral column.

The following conclusions are drawn from a careful study of a number of reported cases:

1. There is a form of myelopathy characterized by—(*a*) the paralysis and atrophy of all the muscles of the body (those of the face excepted); (*b*) the integrity of the sensibility of the sphincters; (*c*) the integrity of the cutaneous nutrition; (*d*) a rapid evolution (during several months); (*e*) ultimately, the complete and definite cure of all the paralytic and atrophic troubles.

2. This affection (for which they propose the name of "rapid and curable general spinal paralysis") is to the acute spinal paralysis of adults what the sub-

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acute general anterior spinal paralysis of Duchenne is to progressive muscular atrophy.

3. This disease depends upon some lesion of the cells in the anterior cornua of the cord, the lesion being situated throughout its length.

4. Although the site of the lesion has been demonstrated by pathological anatomy, its nature still remains to be determined.

5. The etiology, as well as the pathogeny, remains very obscure.

6. The recognition of this form of myelopathy presents considerable practical interest, since upon the differentiation depends a favorable prognosis of complete recovery at an early date, where, at the first sight, the intensity and the diffusion of the paralytic troubles, and the atrophy, would lead us to fear a fatally progressive disease.

GUMMOUS OSTEOMYELITIS IN THE LONG BONES.—In a communication to the *Vierteljahresschrift für Dermatologie und Syphilis*, Prof. Chiari, of Prague, reports nine cases, out of twenty-seven examined, in which after death the marrow of the long bones showed unmistakable evidences of syphilitic deposit. He is of the opinion that the central gummata in the medullary structure of the long bones are much more frequently present than has usually been believed; that they are often multiple, and that during life they not rarely remain entirely latent, so that their existence is first discovered post mortem. The histological examination showed these collections to be the products of an inflammatory hyperplasia of the connective tissue, with the same jelly-like appearance as the other gummata of the bony system, such as the periosteal. Many of them showed a tendency to central caseation, but the anatomical appearances were not precisely alike: they varied in appearance, size, numbers, and location. It was noticed with regard to locality that the bones of the lower extremities were most liable to be invaded. In ten cases, there were six in which gummata were found in the femur, in five they were present in the tibia, in four they were seen in the humerus, and once only in the radius.

As regards local symptoms, they were remarkable for their absence, at least while under observation. In only one case was there any connection demonstrated between osteocopic pains and the disease; in some there were exostoses upon the outer surface of the bone. The termination of the affection is very uncertain: they may remain stationary, be absorbed, or lead to necrosis. In many cases they lead to so-called spontaneous fracture.

DIAGNOSIS OF LUPUS VULGARIS.—Dr. Boeck, of Christiania (*Zeitskrift for practisk Medicin*, Nos. 19, 20, 21), in considering the diagnosis and treatment of lupus, points out that some of the earlier Norwegian authors did not always distinguish clearly between lupus and syphilis, a diagnosis which he regards as very easily made in the great majority of cases. He denies any causative connection between the two diseases. At the most, syphilitic parents, in conferring upon the children weakened cell- and nerve-life, may favor the development of lupus; but inherited syphilis can only be regarded as a predisposing cause.

In its treatment, the usual hygienic and dietetic rules for scrofulous subjects are to be followed; cod-liver oil is especially useful as a medicament. Locally, the following plaster is recommended:

℞ Ol. olivæ,
Res. colophon., āā 8 gm.;
Ceræ flavæ, 15 gm.;
Gum. res. ammoniaci,
Balsam. terebinth. venet., āā 1.00 gm.;
Acidi pyrogallici, 4 gm.
M. Fiat emplast.

After the removal of the plaster the surface is dressed with iodoform.—*Vierteljahrs. für Derm. u. Syph.*

PAINFUL SWELLING OF THE LIVER IN YOUNG ALCOHOLIC SUBJECTS. — Mathieu considers the tender enlarged liver in young alcoholic subjects as due to chronic congestion, and believes that this is an important feature in diagnosis, especially when taken in connection with other symptoms of alcoholism. It is considered as a premonitory sign of interstitial inflammation in the liver, and therefore of importance in prognosis and in the indications for treatment.—*La France Médicale.*

SIGNS OF CONVALESCENCE IN TYPHOID FEVER.—The occurrence of multiple superficial abscesses, and that of polyuria, are two signs of convalescence in typhoid, according to Dr. Chauffard in a recent communication.—*La France Médicale.*

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PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, FEBRUARY 10, 1883.

EDITORIAL.

MEETING OF THE ASSOCIATION FOR THE PROTECTION OF THE INSANE.

THE National Association for the Protection of the Insane and the Prevention of Insanity held a meeting in this city, at the College of Physicians, on January 25 and 26, which was well attended, and which showed an unexpected amount of interest in the objects of the Association. Dr. Joseph Parrish, of Burlington, New Jersey, presided at the sessions, during which a number of interesting communications were presented, for the most part by men of prominence in nervous diseases rather than by those devoted to insanity. Reviewing the proceedings, we observe, first, an address of welcome which was delivered by Prof. S. D. Gross; Dr. Traill Green, of Easton, read a paper on the "Functions of a Medical Staff of an Insane Hospital;" Dr. Charles K. Mills, of Philadelphia, contributed one on "The Duty of Medical Colleges and the General Practitioner towards Mental and Nervous Diseases;" Dr. Joseph Parrish, of New Jersey, read a communication entitled "How to Protect the Insane." In the evening, Rev. R. Heber Newton, of New York, read a paper on "Obligations of the Sane to the Insane," and Dr. H. Marion Sims, of New York, on the "Prevention of Insanity in Certain Cases of Nervous and Hysterical Women." Mr. Clark Bell, of New York, also read a communication on "The Legal Rights of the Insane, and their Enforcement." The second day was largely devoted to papers upon the relations of inebriety to insanity. Dr. T. D. Crothers, of Connecticut, contributed one on the "Prevention of Insanity by the Rational Treatment of Inebriety;" Dr. Baer, of Berlin, presented one, through Dr. Carl Seiler, of this city, on "The Connection between Alcoholism and Insanity; or, the Relation of Inebriety as a Cause of Insanity;" and one was received from Dr. Norman Kerr, of London, England, on "Intemperance and Insanity." Other subjects were also considered by foreign contributors, Dr. J. Milner Fothergill being represented by a communication entitled "Do Perversions of Assimilation Play any Part in the Production of Insanity?" and Dr. James Laler, of Dublin, by one on the "Systematic Education of the Insane as a Means of Cure." There was also one on "Some of the Conditions of Life which influence the Induction of Insanity," written by Dr. Charles Mercier, of London. The last two papers were contributed by gentlemen connected with large insane institutions. With these exceptions, the meetings were remarkable for the absence of any marked evidences of interest among those personally engaged in the practical study of the treatment of the insane.

In the opening address, Prof. Gross urged that increased care should be taken in insane hospitals to have a better classification of the insane, that there should be more efficient treatment in these institutions, and that more attention should be given to the study of etiology and morbid anatomy of mental disease. It was pointed out by others, that the medical staff of such institutions, as a general thing, is not as large as would be required for proper treatment of those under its charge. The subject of women practitioners in insane hospitals was broached, and a resolution adopted calling attention to the need of gynæcologists in all insane institutions, and recommending this addition to the staff, with a preference for female practitioners for this position. An important

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topic considered in Dr. Mills's address was the great need of facilities for the study of mental disease in our colleges; and a resolution was subsequently adopted, directing that a circular be sent by the Association to every medical college in the country, memorializing them upon the subject, and suggesting the immediate establishment of a course of didactic and clinical instruction in psychiatry as a part of the regular compulsory course on medicine.

The need of a faithful commission on lunacy in every State in the Union, with compulsory visitation and examination of all patients under treatment at least twice a year, was especially considered in the paper of Mr. Clark Bell, President of the New York Medico-Legal Society, who strongly insisted upon the need of early action in the matter; this view was also taken in the paper by Dr. Parrish. On motion, a committee was appointed to prepare and present a report on the proper law regarding the care of the insane; and also a committee on statistics, to keep account of the facts regarding the increase of insanity and on the condition of the insane in the United States, to report at the next meeting. Resolutions were also passed recommending regular and pleasant occupation for the insane as a remedial agency; appointing a committee to secure the passage of laws imposing penalties for issuing false certificates of insanity (similar to the Pennsylvania law on this subject); and also a committee to suggest a better name for the Association. The following officers were elected for 1883:

President.—Dr. Joseph Parrish, of Burlington, New Jersey.

Vice-Presidents.—J. S. Jewell, M.D., Chicago, Illinois; C. C. Yemans, M.D., Detroit, Michigan; E. C. Seguin, M.D., New York; Mary Putnam Jacobi, M.D., New York; C. L. Dana, M.D., New York; J. C. Shaw, M.D., Brooklyn; Hon. M. D. Follett, Marietta, Ohio; Hiram Corson, M.D., Conshohocken, Pennsylvania; Hon. R. L. Lambertson, Bethlehem, Pennsylvania; Dr. J. P. Bancroft, Concord, New Hampshire; J. C. Hall, M.D., Monroe, Wisconsin; Hon. James Perkins, Cleveland, Ohio; Dr. W. J. Morton, New York; Dr. Walter Channing, Boston; Garrett S. Cannon, New Jersey.

Secretary and Treasurer.—Miss A. A. Chevaillier, of Boston.

Executive Committee.—Dr. Joseph Parrish, Miss A. A. Chevaillier, Dr. W. B. Atkinson, of Philadelphia, Dr. C. K. Mills, of Philadelphia, Mr. Clark Bell, of New York.

A FEW FINAL WORDS ON THE PHARMACOPŒIA.

IN the last number of *New Remedies* is an attack upon the editor of the *Medical Times* because he has ventured to disagree with the Committee of Revision concerning the dismissal of certain remedies from the Pharmacopœia. From the tone of the article it is perfectly plain that any controversy might readily become personal, and at best no good could come at present out of such controversy. When the years bring the time for the appearance of the supplement, we may have more to say on this matter.

We would, under the circumstances, not have noticed the article in *New Remedies* at all, had not it clearly shown that our writing might naturally lead our readers into the error of supposing that santonin is not officinal.

Troches of santonin have been dismissed from the Pharmacopœia, and troches of santoninate of sodium introduced evidently as a substitute. We ought to have stated clearly that *santonin is still officinal, although its troches are not.* Santonin is habitually used in troches, and all that we said concerning the superiority of the old lozenge, and the danger of the new, is still as applicable as it is true.

In conclusion, though desiring to avoid controversy, we may be allowed to reply to the assertion of the editor of *New Remedies* that "it [oil of camphor] is not mentioned in any text-book upon therapeutics," and the final taunt, "Now is the opportunity for the editor of the *Medical Times* to supplement his little lecture on vermifuges with one entitled 'What I know about Oil of Camphor,'" by the statement that any one may find upon page 206 of H. C.

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Wood's "Treatise on Therapeutics" the peculiar therapeutic value of the oil as contrasted with that of camphor briefly but clearly pointed out; also, that the same information is even more fully given in the article in the "United States Dispensatory," although the editor of *New Remedies* flatly asserts to the contrary. (See second paragraph, page 620, fourteenth edition "United States Dispensatory.")*

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

THE Committee of the American Medical Association having under consideration the subject of establishing an Association journal, appointed at the last meeting at St. Paul and authorized to make all needful arrangements for its publication, held an important meeting in Chicago on the 17th ult., at which final and decisive steps were taken. It is stated that a sufficient number of guarantees from members of the Association had been received to warrant the undertaking, in the minds of the committee, and it was determined that the proper measures to institute the journal shall be set on foot at once. The publication is understood to be a weekly, having something of the general style and appearance of the *British Medical Journal*, —although, it is to be hoped, printed with better-faced type; the place of publication has been also decided upon, Chicago being selected, for reasons convincing to the majority of the committee. The choice of the committee for editor is Dr. N. S. Davis, of Chicago, ex-president of the Association, and a veteran medical editor.

* The *exact* connection of Dr. H. C. Wood with the last edition of the "United States Dispensatory" has never, so far as we know, been stated in print; and as probably most persons believe, as Dr. Castle seems to, that Dr. H. C. Wood revised the book, it is perhaps allowable to state that this is incorrect,—that up to the article "Veratrum Viride" Prof. Geo. B. Wood did the work himself. At or about the article mentioned, Prof. Geo. B. Wood's health so failed that he was forced to hand over his notes made for the remainder of the revision to Dr. H. C. Wood, who, from these notes chiefly, revised the second and third parts of the volume, carrying out as closely as he could the desires of Dr. Geo. B. Wood.

IT is not very often that the New York medical press has anything good to say of Philadelphia, or anything but patches and plasters to cover over the bare places and hide the sores upon the medical body politic of New York. The following sentences, culled from an editorial in the *New York Medical Record*, are, therefore, worthy of passing notice:

"But they [our societies] seem to be quite contented with their present methods, and without ambition to rise above discursive gossip over inconsequential specimens.

"Our neighbor city, Philadelphia, sets us an example that should be followed here. In the past few years a large amount of original work has been done in the pathological laboratories of that city."

The credit might, however, have been well both extended and restricted. The original work has, all of it, with the exception perhaps of one or two papers, been done in the laboratories of the University of Pennsylvania, and has been in the field not only of pathology, but also of physiology. In the aggregate, a great deal has been achieved. Much may have been talked about in New York, but much more original work with less talk has been finished in physiological and pathological directions in the scantily-furnished laboratories of the University during the last decade than in all of the remainder of the United States, not excluding Johns Hopkins University, with its unlimited means.

CORRESPONDENCE.

LONDON LETTER.

THE most enthralling medical matter at the present time is the suicide of a young medical man at Hounslow,—memorable as the place, half-way between London and Windsor, where James II. had his camp when his Dutch son-in-law had to come to the deliverance of a distracted country. The story, as I shall tell it, is not drawn from original sources, for the parties are unknown to me, but from what appears in the London

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press. Therefore any guarantee of the accuracy of what is written is impossible; but from the publicity given to the matter there is little doubt that the items are correct. The sad tale is of painful interest to the profession, and illustrates a phase of medical life which will scarcely raise it in public opinion. Cases have occurred where a medical man has sold a share of a practice to a junior, and soon got rid of him at a great loss and then sold the share again to some one else. Whether this was a case in point may not be affirmed, but the facts point somewhat in that direction. The medical men in this unhappy case are not the lowest stratum of the profession by any means, but men in a good social position,—men, too, who distinguished themselves in their college career, while Dr. Whitmarsh is not unknown in medical literature. What is stated in the press has been sworn before a coroner's jury; and naught is set down by me in malice, or from any other motive, of or on my own account. Some fourteen months ago, Dr. Whitmarsh, who has for some time been settled at Hounslow, sold a share of his practice to Dr. W. W. Edwardes for the sum of eighteen hundred pounds. Recently, he states, Dr. Whitmarsh offered him five hundred pounds to leave the place and let him (Dr. Whitmarsh) retain the existing book-debts, valued at from nine hundred and fifty to one thousand pounds. Of course the young man objected to do this; and then comes out a most horrible story, how far absolutely true may not be said, but there is enough of truth in it to make it a very sad tale. The young man came home early in the morning of December 27, with the unqualified assistant of the firm, who urged him to take the five hundred pounds to turn out. When he went up-stairs to his wife, he told her that a charge had been brought against him by a female patient of assaulting her, and that his senior partner was supporting her in the charge, instead of helping him. It was arranged that next day legal proceedings should be taken to charge the precious pair with conspiracy to defraud. Instead of this, the young man went down-stairs, wrote a letter, and poisoned himself with prussic acid. His wife rushed down-stairs, hearing something was amiss, and went for a neighboring medical man, but in a few minutes all was over. Dr. Edwardes chose to meet his Maker rather than the difficulty which had overtaken him. Later on, the servant found in his drawer a letter to his wife just before the sad act was perpetrated. In this letter he says a foul charge had been brought against him by a wicked, designing woman. He said he would have met the charge had it not been for his partner, who brought pressure to bear upon him to leave the practice. This is the written statement of a man who knew that death was at hand, who had deliberately made up his mind to take his own life; and statements made under the circumstances have ever been regarded as valid. Then he continues, after mentioning the money-proffer, "What is the alternative he offers?—that unless I go he will himself appear as a witness against me, thus assuring my conviction; as what jury could acquit a man when his own partner pretends to believe in his guilt? I am now about to appear before my Maker. I cannot live dishonored, and dishonored I shall be whether I leave the neighborhood or whether I stay to confront the perjured witness. At this awful moment, I solemnly declare that I am innocent of the charge, which has its origin in the morbid imagination of a licentious-minded hysterical woman." This is the language of a cultured man, passionate in his agony. With an ardent hope for his wife and little ones, Dr. Edwardes then made his appearance before One to whom all hearts are laid open. A coroner's inquest was held, where the wretched widow told her story, and the letter was read. When the public heard the story, its wrath was roused. A mob sacked Dr. Whitmarsh's premises, he himself having got out of the way. A strong detachment of police was required to maintain public order and to restrain the popular feeling from further demonstration and damage. Dr. Edwardes was connected with the Volunteers, and every respect was paid to his remains when borne to the grave; for in the fourteen months he had been at Hounslow he had won the good will of all with whom he came in contact. The inquiry before the coroner was adjourned for some days, and when it was resumed a medical certificate was put in that Dr. Whitmarsh was ill and unfit to attend. It was clear he was in no mood to appear and clear himself. Mrs. Edwardes was called again. Her husband had not told her at first of the charge being brought against him, as he naturally wished to spare her; but he had acquainted her father with it, he had told his senior partner, and had gone to the woman and told her her charge was false. When he did tell his wife, he produced a letter in which the woman withdrew her charge and expressed her regret that it had been made. It was signed by "Rose Bignell" and "F. Bignell" (her husband), and witnessed by "Michael Whitmarsh." Yet that night the proffer of five hundred pounds to go away and leave the practice and the book-debts behind him was urged on him while Mrs. Bignell's solicitor was at Dr. Whitmarsh's house. If he would take the five hundred pounds and go, nothing more would be said.

The poor hunted man told his wife that if it were not for her he would face a trial and take the consequences. He told her that the solicitor would take out a warrant next day, and Dr. Whitmarsh would go into the witness-box against him. Of course an older man would have taken the matter more calmly; but this poor young fellow was distracted.

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He had only received one hundred and eighty pounds so far as his share of the profits for his eighteen hundred pounds. Now he was to run away, leaving his money behind him, to start life with five hundred pounds and a blackened reputation. If he did not accept this paltry sum, proceedings were to be taken against him next day. Dr. Whitmarsh had counsel to protect his interests, but no attempt even was made to break down the evidence given by the widow, who was clearing her husband's reputation so bravely. Instead of Dr. Whitmarsh appearing to explain his conduct, the unqualified assistant was put in the witness-box, and led off by declining to be sworn. When Rose Bignell's letter, charging Dr. Edwardes with assault, was read by the partners, the senior called in the assistant, saying, "We are in a pretty mess!" An ominous way of putting it to an assistant who was without a medical qualification. It was "the practice" that was injured. Mrs. Edwardes was never mentioned. Then when Dr. Edwardes went to Mrs. Bignell the charge was withdrawn; but the senior partner raked it up again when his junior declined to run away from the place with less than a third of what he had paid so recently. From that witness it seems the charge was held to be a dissolution of the partnership. Instead of boldly standing up for his junior partner and encouraging him to prosecute, and so clear up the case, the defence the senior suggests is that his precious practice would be injured, and he offers his junior a sum to get away out of the place. This is the best construction the man can put forward to explain his conduct. It is a poor paltry piece of selfishness, look at it as charitably as we may.

The solicitor for the deceased explained in court that the evening before his death the deceased had gone to his own solicitor (who was present in court) to instruct him to take proceedings against Mrs. Bignell and Dr. Whitmarsh for conspiracy. And thus the matter stands at present, the coroner having adjourned the inquiry for a week. When the widowed Mrs. Edwardes, escorted by her father, went up the street, she was respectfully greeted. A large force of police were protecting Dr. Whitmarsh's premises: where that gentleman and Mrs. Bignell have put themselves out of the way is not stated by the press. Mrs. Bignell has left the neighborhood, it seems. Dr. Whitmarsh, who is a medical officer of the Brentford Union, has written to his board of guardians intimating to them that he has made arrangements for a lengthened absence from his duties. Very lengthened it will probably be, for Hounslow does not seem a very safe place for him. Indeed, if he could hire a lodging in Newgate or Portland he would be comparatively safe from the rage of the populace. Professional opinion is very severe upon Dr. Whitmarsh, judging from what I have heard. Curiously enough, it seems that gentleman, for a short time past, has been a recognized supporter of the Salvation Army in Hounslow, and has frequently attended their gatherings, being one of the speakers on two or three occasions. The excitement at Hounslow has been intense; policemen have been seriously injured, while damage to the residence of Dr. Whitmarsh has been done to the extent of some hundreds of pounds. The chairman of the local bench of magistrates has been threatened with personal violence if the prisoners who have been apprehended in the riots were punished. Not only had a large body of police to patrol the town while the inquest was actually being held, but a large force was required to keep order when the magistrates heard the charges of assault and rioting. A subscription had been got up to defend the prisoners, so excited is the neighborhood in the matter. One of the policemen is in a critical state with concussion of the brain. The presiding magistrate said matters had become so serious that if they showed any weakness there would be murder. The prisoner was remanded for a week, to see if the policeman would be sufficiently recovered to give evidence, bail being decidedly refused. Another has been sent to prison for a month. On Sunday, thousands of persons from London and elsewhere visited the usually quiet little place.

I do not know whether nurses in your country are assuming the attitude they are choosing to take here or not. Serious rows have taken place at several important medical institutions here in the last few years, started apparently by nurses aspiring to be superior to the medical men. I am in a position to contribute a small item to "the nurse-question," which may not be entirely without interest. Last week a call came to see a patient with a heart-affection, in the Isle of Wight. He was a comparatively young man, with mitral stenosis, and was under one of the best practitioners in England. On arrival, the patient was found in bed, breathing laboriously fifty-two times per minute, with a pulse of 120. Clearly there was considerable impairment of the lung-space, and the right lung was extensively congested. There was a good deal of fluid in the abdominal cavity, and some œdema of the lower extremities. The treatment had consisted of digitalis and acetate of potash in broom, with a sixth of a grain of elaterium twice a week. The treatment was judicious and energetic, all will admit. Nevertheless, some albumen had shown itself in the urine, and the medical man wished me to see the patient, who had previously consulted me in November last. My recent experience has told me in unmistakable accents that, when the respiration mounts up out of the normal proportion to the pulse-rate, it is well to resort to stimulants of the respiratory centre. So some carbonate of ammonia and

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nux vomica were given with the digitalis and broom, and the patient was sweated with Sir James Simpson's bath (bottles of hot water in stockings wrung out of hot water, packed round the patient) as described in my "Practitioner's Hand-Book of Treatment." He perspired freely at the first bath, which is not usual, and a favorable prognosis was hazarded on the conditions that the line of treatment was carefully followed, otherwise the case would probably sink. For the carrying out of these conditions a nurse who understood what was required was essential. A letter just received says that the patient has good days, and the last two nights have been excellent (that is, after two nights of the treatment the patient begins to have comfortable rest). The respiration has fallen to 24, and the normal ratio of four to one is maintained in the pulse (96). The urine is increasing; the bowels and skin act well. These results are all that could possibly be wished. These details are given to demonstrate both what treatment can achieve, even in very unpromising cases, and to show that the *tout ensemble* of the case was one where it was very desirable that the nurse should be made acquainted with its nature, and what the presiding medical authority desired to have done, and what was to be avoided. The resident medical gentleman wrote to a well-known nursing institution, from which he had had nurses previously, asking the nurse to be sent to me for approval before being sent off. This was to give me an opportunity of judging of the woman's fitness for the case in hand, and of giving her my views of what was required of her, and how she must go on. The answer from the matron of the institution was curt, and to the effect that it was not their custom to send nurses on approval, and they were too busy to attend to the request. On the letter reaching me, it seemed desirable to know if this was mere impertinence. So a mild inquiry was made if the lady was in earnest, intimating that my private opinion was that the nurse and her knowledge were important matters in critical cases. In answer thereto the following reached me, bearing the signature of a well-known medical name, which, however, will be withheld, though exposure would do no harm, some might think. It runs, "The Lady Superior begs me to write to you to explain that it is not customary at —— to send nurses on approval. If the general nature of the case is stated, the Lady Superior will do her best to send a suitable nurse." It is difficult to say whether the stupendous self-sufficiency of the Lady Superior or the blind faith in her on the part of the medical man is the more remarkable in this curious epistle. "The general nature" of a case which had bothered one of the best heads in the profession was quite sufficient for this Superior to send "a suitable nurse." The English language is inadequate to describe the impression made on me by this astounding impertinence. That a medical man could be found to pen such absurdity is almost itself incredible; but there is the signature, legible enough to be unmistakable. No wonder the nurses of this marvellous institution look down upon the medical profession, when such truckling is exhibited by a man of reputation and position. Women know the nature of men and their weaknesses; but where was the self-respect of this weak-kneed medical man, who prostituted his professional dignity before the arrogance of a self-satisfied woman and became the mouthpiece of such astounding rubbish? It is these traitors to the profession who encourage the pretensions of these Sisters, instead of stamping on them. If they would only take their feebleness out of the question, the manlier part of the profession would soon deal with these feminine hallucinations and put the nurses in their proper place,—for in their proper place they are simply invaluable. But to assume that the Lady Superior is so inspired that "the general nature of the case" was sufficient for her to send "a suitable nurse" in this instance, is ridiculous. With all due respect for her medical champion, I venture to think the case would have taxed his powers, even after he had seen it. But to contemplate the Lady Superior's vast capacities gives me a sense of humility, which those who do not like me (no small crowd) will think an excellent moral lesson.

J. MILNER FOTHERGILL.

PROCEEDINGS OF SOCIETIES.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

A CONVERSATIONAL meeting of the Society was held at the hall of the Society, December 20, 1882.

CASE OF POLYCYSTIC KIDNEY.

Dr. J. B. Walter presented, on behalf of Dr. John Sheets, a specimen of polycystic kidney, and detailed the following clinical history:

J. C., 45 years old, machinist, a large, well-developed man, moderately stout, had always been anæmic, never had suffered from any serious illness, always a hearty eater, drank moderately of malt and spirituous liquors, never was intoxicated.

During the summer of 1881 he was troubled with several violent attacks of vomiting lasting from one to three days.

February 1, 1882, he was compelled to quit work and take to his bed, suffering with frequent violent vomiting; his face was pale and somewhat swollen, and he complained of a severe pain in the region of his liver and the back of his head.

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There was no enlargement of the liver; pressure upon it in some places was painful.

Passed a large quantity of urine; sp. gr. 1010; examination revealed the presence of about one-half volume of albumen. Under treatment the vomiting ceased after four days, and he returned to work.

March 2, he returned home from Macon, Georgia, ill; while there, he had been induced to take several electric baths, which he thought made him worse.

He complained of severe pain in the back and limbs, severe occipital headache, and vomiting. Temperature 97⅞°, pulse 80 and feeble. Several abscesses on the left leg which were slow to mature, several smaller ones appearing around them. Still passed a large quantity of urine; specific gravity 1010; pale straw color; containing an immense quantity of albumen.

March 9, he was so much improved that he thought medical attendance unnecessary; and, notwithstanding cautioning, he went out of the house.

March 19, he was again confined to the house, much weaker than he had been previously. He complained of the same pains in the region of the liver and in the head, together with intermittent lancinating pains in his joints, also cramps in the legs. Bowels constipated; urine passed to all appearances normal in quantity and quality. Frequent attacks of vomiting.

He remained in about the same condition until the 25th, when he became worse, suffering with œdema of the face and lower extremities. Unable to take any food; intense thirst; hiccoughs; and the characteristic odor from the skin indicating uræmia.

Urine contained one-half volume of albumen, no casts or sugar. Continued to complain of severe pain in the region of the liver, drowsiness, and sense of suffocation. Constant collection of bitter, bloody mucus in his mouth.

Pulse 90, feeble; temperature 97°; respiration 20. During the previous two weeks the highest temperature reached was 98⅕°; lowest 97°.

He continued to grow worse until April 2, when he died. Two days previous to death he passed daily three pints of urine; after that it was drawn by the catheter.

Post-mortem, twenty-four hours after death.—Great emaciation; numerous abscesses on the left leg, still unhealed. Moderate amount of adipose and muscular tissue in the abdominal walls. Intestines distended with gas and containing a few small lumps of fæces. Stomach contracted. Liver normal in appearance and consistence. Kidneys almost three times their normal size, covered with fat, and entirely covered with small cysts, from the size of a pea to that of a nutmeg, of various colors, mostly opaque.

Upon section, filled with numerous cavities, containing a straw-colored fluid, and most of the cavities quite tense, some few of the cysts filled with a dark fluid evidently resulting from hemorrhages.

CASE OF MITRAL OBSTRUCTIVE HEART-DISEASE.

Dr. Bruen presented the following case:

This little patient is 9 years of age, and for four years he has suffered from the results of endocarditis induced by rheumatism. The special lesion consists in mitral disease, which represents principally an obstruction of the auriculo-ventricular orifice, although there is also some regurgitation. The murmurs which may be heard are—first, a presystolic blowing sound, audible most distinctly at the apex; second, a systolic murmur distributed over the mitral area into axillæ and heard at the angle of left scapula. There is also a pronounced accentuation of the pulmonary artery second sound audible at the second left costal cartilage. This sound, when accentuated, is an indication of the repletion of the pulmonary artery with blood, and the consequent increase in the arterial tension.

I wish to call special attention to the enlargement of the area of cardiac dulness.

Commencing an inch to the right of the sternum from the third to the sixth costo-sternal junction, and to the left of the sternum from the second rib to the seventh, in the form of a blunt triangle nearly four inches broad at apex and seven at base. The enlargement of the heart is chiefly in the right ventricle and the left auricle, though the left ventricle is also somewhat enlarged.

This enlargement has at times simulated a pleural effusion when the pulmonary suffusion has been extreme, owing to catarrhs or temporary cardiac failure. The danger in this case, as in many others of its class, is a systole from failure of the right heart. In mitral regurgitation the gradual leakage through the valves occasions a venous repletion which increases so gradually that the repletion first manifests itself by dropsy more or less general, or an impairment of intestinal digestion due to congestion of the liver or of the venous radicles of the mesenteric circulation. In mitral obstruction the venous system does not suffer from repletion until after dilatation of the left auricle and right ventricle has succeeded the primary hypertrophy of these chambers. The clinical history, therefore, of these cases is similar to that of aortic disease. In the treatment I think it is manifest that efforts must be directed to relieve the constant pulmonary repletion, and thereby lessen the chances of cardiac dilatation.

At one time in the history of the case before us, when treatment had totally failed, a copious epistaxis, which lasted for several hours, until the boy was really blanched, was brought about by picking the nose. Since then his health has been uninterrupted, and no treatment directed to his heart has been

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required. Briefly speaking, the suggestion of nature was not lost upon me, and I have found that cupping, both wet and dry, has been the most satisfactory method of treatment in similar cases. I have bled adults to the extent of a pint of blood at a time, with the most happy results, but I always try the cupping first, as the less radical measure. I have not been deterred in practising this treatment by anæmia or atheroma, since the load which is carried by the right heart and lungs is always very severe, and an efficient circulation is rapidly followed by increased assimilation and nutrition. Where I have reason, however, to suspect extreme cardiac feebleness, I rest satisfied in cupping.

The other agent from which I have derived most assistance is belladonna. I will not speculate on the phyiological action as explaining the happy effects of the drug, but I will suggest that by dilatation of the capillaries the arterial tension is lessened and the work of the heart rendered easier. Possibly there is a stimulative action upon the respiratory centres at the same time.

Digitalis, I believe, is useful, but chiefly as an adjuvant. As a powerful cardiac stimulant, it is helpful by increasing the systole of right and left ventricle, and it may also lengthen the diastole, and thereby the pulmonary circulation is relieved. But used without an attempt to lessen the pulmonary and right-heart repletion, it is like applying the goad to an already overloaded steed. When digitalis has signally failed in these cases, belladonna associated with some pure cardiac stimulant, as ether or ammonia, has achieved striking results, although it remains a fact that digitalis is always a valuable adjuvant.

DISCUSSION ON TREATMENT OF WHOOPING-COUGH.

Dr. Blackwood asked the views of the members with reference to the treatment of whooping-cough, and stated that in his experience little good was obtained through therapeutic measures. He was especially interested at present, as the patient was his daughter, and the attack was particularly severe at night.

Dr. J. M. Campbell said that undoubtedly the whoop was the serious feature of the disease. He had met with success by using a combination of belladonna and chloral, and had also recently used with good results ammonium picrate in doses of one-eighth to one-sixth of a grain every two or three hours to a small child. This remedy was intensely bitter, but might be given in a small pill or pellet. In the few cases tried it had not failed to break up the whoop.

Dr. Atkinson said that he had tried almost everything, and had found belladonna the best remedy, but it must be carried to its toxic effect and maintained at that point for a short time. He had used it even in very young children. Ammonium bromide might often be advantageously combined with the belladonna; but the chief point was to secure and maintain the toxic effect.

Dr. Bartholow considered time an important element in the treatment of whooping-cough, but thought that no doubt could be held as to the efficacy of belladonna, chloral, and other agents which relieve spasm. The disease is specific, and is due to a germ as yet unrecognized, and we are therefore unable to employ specific treatment: we treat only the main symptoms. Change of location often proves of benefit, and it is not because any special curative influence exists in the new location that we have the good results, but because a change has occurred. When benefit follows taking children to the neighborhood of gas-works, it is not the ammonia which does the work: it is the change of location. He had in the same way seen children cured by a journey across the Ohio River. Among the remedies used with most success were chestnut-leaves, and cochineal, with potassium carbonate, but belladonna was the best. Until, however, we discover the specific treatment, our remedies will be at best palliative.

Dr. Blackwood, in closing the discussion, said, in reply to a question by Dr. Mills, that quinine had not been of service. Little value was to be attributed to chloral, bromides, or belladonna. More aid was had from fresh air, regulation of the digestion, and patience. He thought the transfer of the patient to another locality helped the family doctor by relieving him of that patient at least, and generally gave the physicians in the new neighborhood more to do by starting new cases.

H. L.

A CONVERSATIONAL meeting of the Society was held at the hall of the Society, January 10, 1883.

DISCUSSION ON MUSHROOM-POISONING.

Dr. O'Hara asked for further information in regard to the effect of boiling the mushrooms in water.

Dr. Leffmann said that the toxicology of these articles was still in an unsatisfactory state. Most of the analyses were of little value, and the statements of different authorities were somewhat discordant. From what he had seen in reference to the subject, he was inclined to the opinion that the poisonous action was largely dependent on the conditions of soil and season, and the effect of the same species might differ greatly at different times.

Dr. Eskridge desired to emphasize a remark which had been made by both Dr. Evans and Dr. Leffmann. This was that the condition of weather influenced the character of the fungus. Farmers living in certain localities were in the habit of penning up their hogs for a few days immediately after a heavy rainfall fol-

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lowing a prolonged drought, knowing that if the animals are allowed to run at large many will be poisoned by the mushrooms which spring up from the wet ground, while those fungi which grow during ordinary weather are not hurtful.

Dr. J. C. Wilson said that it is a curious fact that an article like mushrooms, which is such a favorite article of diet with many people, should be so little understood. In country houses, where the ladies of the household exercise supervision over the kitchen, several tests of safety for mushrooms are in common use. Two of these had been mentioned,—the red gills and the detachable capsule; but a third could be added; this is, that if the mushrooms while cooking blacken a silver spoon they are regarded as unfit to eat. He wished to know if this test had ever been explained on chemical principles.

Dr. Risley confirmed the remarks of Dr. Wilson, adding that freshness was of the utmost importance. The mushroom should be gathered as soon as possible after its growth, for in a few hours the gills lost their fresh pinkish tint, and the umbrella covering would no longer peel off without bringing with it masses of the underlying tissue. In his experience the silver-spoon test had always been insisted upon as a valuable addition to the indications furnished by the color of the gills and the ready removal of the covering.

Dr. Sinkler called attention to the fact that atropia in doses of about the one-hundred-and-twentieth of a grain hypodermically was recommended by Dr. Lauder Brunton, in the *British Medical Journal*, some years ago, as an antidote for mushroom-poison. He had seen a patient who was suffering from violent vomiting and purging after having partaken largely of mushrooms. Acting upon Dr. Brunton's suggestion, he had given the one-hundred-and-twentieth of a grain of atropia hypodermically, with speedy relief to the symptoms.

Dr. H. Y. Evans, in closing the discussion, said that he believed that all mushrooms contained the poisonous principle, but not always in sufficient quantity to do harm. The difference between the safe and the unsafe was one of degree only. As regards the use of atropia, he could only say that the cases he had seen and those of which he had read were all, in the early stage, marked by dilated pupil and dry throat,—the symptoms of belladonna-poisoning, which, indeed, he had at first supposed one case to be. From such symptoms he could hardly think that atropia was indicated.

DISCUSSION ON CASES OF PNEUMONIA.

Dr. O'Hara stated that when he saw the first case the cerebral symptoms were like those of cerebral exhaustion from alcoholism. It was not uncommon to find head-symptoms in typhoid fever overriding all other symptoms; and this might be occasioned by the poisoned state of the blood furnished to the cerebral centres. A pneumonia could in the same way cause the same symptoms. He recalled a case in which there were very violent brain-symptoms. A diagnosis of acute paresis of the insane was disputed, and the consulting physician thought that it was a brain-tumor. The symptoms were hallucination, insomnia, paralysis of swallowing-muscles, attempted suicide, sometimes hydrophobic symptoms. Upon post-mortem, hardly sufficient lesion was found in the brain-membranes to verify any diagnosis. Dr. Mills, who performed the autopsy, thought the microscope would attest changes in the brain-structure.

DISCUSSION ON DYSPEPSIA.

Dr. Eskridge said that some years ago Schiff had stated that a stomach fasting many hours, or exhausted by copious digestion, is incapable of secreting a gastric juice which is active until the gastric mucous membrane has absorbed certain substances known as peptogens, which are readily changed into pepsin. The soluble portions of meats contained in soups and broths were easily converted into pepsin, and in these forms have been recommended an hour or so before a regular meal following a long fast. Dr. Eskridge had found milk, alone or with dry bread, between meals, sufficient to prevent unpleasant feelings in many cases of minor dyspepsia.

NEW YORK ACADEMY OF MEDICINE.

STATED MEETING, JANUARY 18, 1883.

R. F. WEIR, M.D., Vice-President, in the chair.

DR. PAUL F. MUNDE read a paper entitled "Secondary Puerperal Hemorrhage."

The possibility that alarming uterine hemorrhage may occur as late as several weeks after confinement was scarcely more than referred to by most authorities in obstetrics. The subject was treated more fully, however, in the standard works of Barker, Winckel, Playfair, Spiegelberg, and Barnes, and in an essay by Dr. Theophilus Parvin, read before the annual meeting of the American Gynæcological Society for 1880.

The following case presented certain features not referred to in Dr. Parvin's paper. Dr. Mundé saw the patient, in consultation with Dr. Kohn, on August 2, 1882. She was 25 years of age, had always been healthy, and was the mother of three children. Labor began on the 16th of July, progressed slowly, and after twenty-one hours, the head almost resting upon the perineum, an attempt was made to deliver with the forceps, but failed. Delivery was effected with the cephalotribe after perforation, the trouble being hydrocephalus. Hemorrhage was pro-

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Ginger, Mexican.
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Grindelia Squarrosa.
Guaco Leaves.
Guarana.
Helianthella.
Honduras Bark.
Horsemint.
Iron Wood.
Jaborandi.
Jamaica Dogwood.
Jamaica Pimento Leaves.
Judas Tree.
Juriballi.
Kamala.
Kava Kava.
Kooso Flowers.
Lily of the Valley Flowers.
Lily of the Valley Root.
Manaca.
Mango Bark.
Mango Fruit.
Manzanita Leaves.
Mercury Weed.
Mistletoe.
Musk Root.
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Pulsatilla.
Quebracho Bark.
Quinine Flower.
Rhus Aromatica.
Sabbatia Campestris.
Sandal Wood.
Sarracenia Flava.
Sassy Bark.
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fuse, but soon ceased. The placenta was adherent to the right side of the fundus, and required to be separated by the hand. Care was taken to leave no fragments behind. The anterior lip of the cervix was torn. Two fluid-drachms of the extract of ergot were administered, and all hemorrhage ceased. With the exception of a slight elevation of the temperature and pulse, the patient seemed to be doing well for the next six days. The lochia were fetid from the third day. Uterine injections brought away small threads of coagula, and the lochia lost their offensive odor, but on the twelfth day they again became offensive, and on the sixteenth day profuse hemorrhage set in. When Dr. Mundé saw the patient, four hours later, she was almost exsanguinated. Hemorrhage had been checked for a few minutes with hot-water injections, but, recommencing, a vaginal tamponade was also applied. Dr. Mundé found the patient with low head, perfectly pallid face, hands and feet cold and clammy, pulse 120, very weak, consciousness unimpaired. The fundus of the uterus was on a line with the umbilicus, irregular in outline. He prepared some fresh carbolized tampons, procured a few ounces of tincture of iodine, filled a syringe with hot carbolized water, and then proceeded to remove the vaginal tampons. The uterine cavity was found filled with soft coagula, offensive, dark-colored, mixed with threads of decidua; the surface was soft and pulpy, and the mucous membrane seemed to be much thickened. The cavity was washed out with hot carbolized water, and half an ounce of pure tincture of iodine was then injected through a tube, introduced through the vaginal speculum with considerable force, so as to insure thorough distribution. Cotton tampons, joined with a cord, were introduced, to be removed within six hours. Hypodermics of brandy were given, and ten drops of aromatic spirit of ammonia, five drops of spirit of camphor, and a teaspoonful of brandy were ordered in ice-water every half-hour. An ice-bag was put over the uterus, and a hypodermic injection of ergot—Squibb's fluid extract of ergot—was made at the abdomen. Carbolized water should be injected into the uterus on removing the tampons, to guard against decomposition of the coagula produced by the iodine. Dr. Mundé visited the patient twenty-four hours later, and learned that there had been no further hemorrhage. The cavity of the uterus had been washed out twice. A hectic flush and a peculiar sweetish odor sustained the opinion that the patient was suffering from septic endometritis. Injections of a solution of permanganate of potash were made into the uterus every three hours. Should the temperature rise above 102° F., ten grains of the salicylate of soda were to be given every two hours, nutritious enemata, and stimulants. The prognosis was considered unfavorable. Dr. Kohn gave intra-uterine injections of a solution of quinine, one drachm to the quart, apparently with benefit. The patient recovered slowly, convalescence being complete at the end of five weeks.

The author of the paper then reviewed some of the points of interest in the case, and spoke of the causes of secondary puerperal hemorrhage. These might be divided into constitutional and local. Under the former, hæmophilia, mental emotion, functional disease of the liver, improper use of stimulants, sudden assumption of the erect position; under the latter, irregular and inefficient contraction of the uterus, clots in the uterine cavity, portions of retained placenta or membranes, retroflexion of the uterus, laceration of the vagina, vulva, or cervix: inflammatory ulceration of the cervix, malignant disease of the cervix, pelvic cellulitis, involution of the uterus, premature sexual intercourse, loaded rectum, distended urinary bladder, malarial poisoning, and general febrile disturbances were also causes of secondary metrorrhagia. His own case belonged to the class in which there was disease of the inner surface of the uterus, chiefly endometritis.

The time at which secondary hemorrhage was liable to occur varied with the character of the labor, the care taken at the third stage, the precautions during childbed, and accidental circumstances. Barker referred to cases as late as the fifth or sixth week after labor, and Helfer to one on the fourth week; but it occurred very rarely later than the fourteenth day. The after-effects of protracted secondary hemorrhage were its debilitating effects upon the woman, and subsequent uterine disease of some kind or other. After referring to points in the treatment of this case, Dr. Mundé concluded his paper with remarks on the means of preventing primary and secondary hemorrhage after labor. With regard to the third stage of labor and the early puerperal state the following rules were given:

Always keep the hand on the fundus uteri from the moment the head appears at the vulva until the placenta is expelled.

Do not hasten the expulsion of the placenta too much.

Watch the uterus with the hand, using gentle friction occasionally, for at least one hour.

Always give ergot immediately after the birth of the child.

If the uterus shows reluctance to remain contracted, rub the fundus gently with a piece of ice, or insert a cone-shaped piece into the cavity.

Always make sure that the uterus contains no coagula.

Apply the child to the breast early.

Apply an equably tight binder, and, if there be tendency to hemorrhage, a pad should be placed over the fundus.

If there be laceration of the cervix or of the vagina, future oozing may be checked by

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mild astringent injections, or by applications through the speculum. Immediate suture for laceration of the cervix was not considered feasible.

Do not allow the lying-in woman to leave her bed before the tenth day.

See that the bladder is empty and is not interfering with uterine contractions.

See that the nozzle of the syringe is not introduced too far, and that too much force is not used in giving the customary cleansing injection.

DISCUSSION.

Dr. W. M. POLK, on invitation, opened the discussion, and referred to a case of profuse secondary hemorrhage which occurred on the fifteenth day after confinement. The tampon was applied because the uterus was not large and was firmly contracted. From negligence on the part of the nurse, complete atresia of the vagina was produced by the iron styptic, for which a secondary operation was afterwards performed. Dr. Polk referred to the causes of secondary puerperal hemorrhage under the head of constitutional and local, to the former belonging cachectic states, such as from malarial or mercurial poisoning, etc., and to the latter the various septic inflammations belonging to the uterus, etc. He did not approve of the bandage and compress as generally applied. He preferred hot to cold water injections against hemorrhage. Immediate operation for laceration of the cervix was considered out of place.

Dr. E. L. PARTRIDGE spoke specially with reference to previous conditions which, after labor, interfered with proper uterine contraction, predisposing to secondary hemorrhage, and then referred to a case of hemorrhage which occurred on the ninth day after delivery, due to an annular slough involving the entire vaginal end of the cervix. The hemorrhage was so profuse that the patient's life was in jeopardy. The history of the case was one of early rupture of the membranes. He thought the tampon should not be resorted to until other means for controlling hemorrhage had proved ineffectual, although in a case like that of Dr. Mundé he would not hesitate to employ it. The danger was from absorption of septic material.

Dr. H. T. HANKS referred to some cases of undoubted malarial origin. In one case which occurred on the fourteenth day profuse hemorrhage was controlled by the battery and hot-water injections. He did not approve of the tampon, and thought also that it was not necessary in every case to give a drachm of ergot after the birth of the child. He agreed with nearly all the remarks made by Dr. Mundé.

In closing the discussion, Dr. MUNDÉ remarked that it was certainly a risky practice to introduce the tampon in these cases, but it was necessary in this instance to guard against the loss of another drop of blood.

Dr. E. B. BRONSON then read a paper on "Eczema, its Pathology, and the Principles of its Treatment."

The author of the paper believed that the epidermis rather than the vascular layer beneath was primarily involved in the disease, and referred to recent investigations going to show that the epidermis as well as the papillary layer was supplied with nerves. The itching which took place in the course of the disease was probably due to disorder of those nerves, the pathological anatomy of which, however, was not much known.

The therapeutic indications were to allay irritation and assist repair, and consisted in measures of rest and stimulation. Local applications were either mechanical, chemical, or dynamic. Wet applications were best for the higher grades of eczema. Astringents, alkalies, or powders might be applied in lotions. Undiluted glycerin acted as an irritant. Later was the period for emollients, and afterwards that for ointments. The zinc oxide was the best protective ointment. Absorbent cotton or lotion was better in cases of erosion with copious discharge.

Among the agents which modified vital action were the alkalies, which had a sedative influence upon the sensitive nerves. The strength of the alkali employed should vary according to the age or severity of the case. The soap treatment was the most effectual for squamous eczema. Pruritus might be relieved by continued hot-water applications.

Carbolic acid and the tar preparations should not be employed in the stage of active exudation. Mercurials should be employed in later stages, when the accumulations occurring in the progress of the inflammation interfered with nutrition.

The internal administration of medicines might be of some service in diminishing reflex irritation, in restoring the general tone of the system, and in aiding local remedies. The most rational course of treatment was that directed to the skin itself, for eczema was essentially a local disease. In general, the narcotic series of remedies were to be condemned.

DISCUSSION.

Dr. R. W. TAYLOR agreed with Dr. Bronson in the main, but there was a little tendency in some parts of the paper towards the theoretical. He was not prepared to accept the view that the disease in its commencement was altogether above the rete mucosum. With regard to treatment, soothing applications in the erythematous stage, such as lead with opium, etc.; later, stimulation, and this was an important factor in most cases. Alkalies had a wide field of usefulness, and potash solutions would sometimes succeed where the soaps would fail. He was glad to know that the author of the paper had rejected the idea of diathesis. He referred to a tendency to eczema acquired in early years, when the disease was not prop-

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erly attended to. Local measures were most important in the treatment, but in many cases decided benefit was derived from the internal administration of arsenic.

Dr. BULKLEY considered the paper as one of the best *exposés* of the subject of eczema which had been written. The subject of the alterations in the cellular layers of the skin had not received in years past the attention which its importance demanded. It was certainly true that the skin sometimes took on a tendency to eczema which lasted for a lifetime. He did not believe in diathesis. The part played by the nervous system should be borne in mind in considering the etiology of the disease. He did not believe that persons who were sufferers from eczema were in perfect health in other respects. He had reported cases which were greatly benefited by Fowler's solution without other treatment. He did not, however, believe that there was any specific for the affection.

NEW YORK COUNTY MEDICAL SOCIETY.

STATED MEETING, JANUARY 22, 1883.

DAVID WEBSTER, M.D., President, in the chair.

THE scientific paper of the evening was read by Dr. ROCKWELL, on "The Differential Indications for the Use of Dynamic and Franklinic or Static Electricity."

The author remarked that when a distinguished professor could say to a large class of students that a simple faradic apparatus would practically answer every purpose in medical electricity, he thought it was in order to discuss the subject. To state that electricity had been used in a given case conveyed but little meaning, unless the kind of electricity and the manner of its application were mentioned. It was not, however, to be supposed that one form of electricity only was appropriate for one kind of disease, a second for another, and a third for still another. There were, nevertheless, certain pathological lesions which demanded only a certain kind of electricity, other kinds being useless or injurious. Hemiplegia, for instance, accompanied by exalted muscular contractility, called for a mild and rapidly-interrupted faradic current, if for any form of electricity whatever. Indeed, the same current was usually preferable if the muscular contractions were only somewhat less readily called out than in the normal state. The galvanic current was indicated when there was very great diminution of electro-muscular contractility. In most cases of paraplegia, either complete or proximate, loss of farado-muscular contractility exists at least for a short time, and the galvanic current alone is applicable. The faradic current might be useful in attempting to improve impaired nutrition of the paralyzed members. The constant current was alone applicable for directly affecting the central nervous system. In nearly all cases where electricity was indicated, each one of its forms—faradism, franklinism, or galvanism—might at one time or another possess positive value over the others.

In the great majority of cases of neuralgia where firm pressure over the affected nerves aggravated the pain, the galvanic current was indicated; if pain was not increased by pressure, the faradic current should be used. Hysterical hyperæsthesia called for the faradic current. While it was impossible in many diseases to say that a particular current was indicated to the exclusion of others, it was possible to name a variety of conditions where, as a rule, one method of treatment with one form of current was superior to others. The faradic current was indicated for its tonic effects in cases known as general debility. Not much was to be said of individual conditions which seemed to demand the faradic current alone. But few distinct organic or functional diseases in every phase of their manifestation always demanded a single form of electricity. Asthenopia accompanied by hyperæsthesia of the retina and ciliary nerves seemed to demand the faradic current alone. Galvanism was of little service for the paralysis following diphtheria. Cases were then referred to.

Galvanism was particularly indicated in special irritation or neuralgia, and in certain neuralgic sequelæ of cerebro-spinal meningitis; it was also indicated in exophthalmic goitre, and in the restoration of the senses of taste and smell, and was superior to faradism in the treatment of skin affections; the author believed it preferable in the treatment of extra-uterine pregnancy. The form of electricity indicated in chorea varied according to the general condition of the patient,—central galvanism in those who were well nourished, and general faradization in those whose general condition was impaired. The same rule held in amenorrhœa. The galvanic current was more frequently indicated in dysmenorrhœa.

Franklinic electricity was less efficacious as a constitutional tonic than was general faradization properly applied, but it was a valuable supplement. The pain of muscular rheumatism was relieved by franklinism sooner and more effectually than by other methods. It acted best administered by roller. Franklinism was superior to either galvanism or faradism for relieving pain of a chronic character, confined to no special nerve-trunk, with no tenderness on pressure; it was also frequently most efficacious in enlarged joints of subacute and chronic rheumatism, and in facilitating absorption in chronic synovitis. It should be employed in the form of sparks. Franklinism was often superior to other forms in old contractures and in cutaneous anæsthesia. Valuable as was franklinic electricity,

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it had a more limited field of usefulness than dynamic. He who began with franklinism to study and practise medical electricity began at the wrong end.

DISCUSSION.

Dr. A. JACOBI coincided with most of the statements contained in Dr. Rockwell's paper. He had not had any experience with franklinic electricity. There was one class of cases of diphtheritic paralysis which proved fatal unless treated speedily and effectively. He referred to those in which there was paralysis of the respiratory muscles,—the only class of cases in which he had seen a fatal termination, with the exception of a few where the muscles of deglutition were paralyzed and foreign bodies entered the respiratory passages. For these cases of paralysis of the respiratory muscles following diphtheria, the faradic current frequently repeated was often of a great deal of benefit.

Dr. L. A. SAYRE said that Dr. Rockwell's paper was so complete and comprehensive an *exposé* of the matter to which it referred that he could add nothing. His experience corroborated all the statements therein contained.

Dr. GARRISH fully endorsed the paper. He thought that the majority of practitioners began the use of electricity at too early a period in disease. He did not regard it as of value in the acute stage. In certain cases of drowning he had found electricity of benefit in restoring life, aided by hypodermic injections of aqua ammoniæ.

Dr. A. JACOBI thought that the statements contained in Dr. Rockwell's paper would bear him out in the inference that, in all affections of the vaso-motor system and diseases in which the trophic nerves were involved, galvanism, as a rule, was preferable. He asked Dr. Rockwell if this broad statement coincided with his views.

Dr. ROCKWELL replied that, as a general law, it was true, but he doubted whether it could be made absolute. For instance, take a case of facial paralysis due to cold, rheumatismal in character. One would hardly call this an affection of the vaso-motor nerves; and yet the galvanic current was the one which was most beneficial. No contractions were obtained in such a case with faradism, which came into play only later as a general tonic. He thought, however, that the rule enunciated by Dr. Jacobi was applicable to nearly all diseases.

Dr. JACOBI thought that the exception mentioned by Dr. Rockwell might come under the general law, if we knew exactly what the condition was in these rheumatic cases. In most of them there was probably in the beginning a disorder of the circulation also.

Dr. ROCKWELL remarked that probably there would be to some extent. His idea was that in cases of facial paralysis the intermuscular nerves were affected, and therefore the galvanic current was used, which acted upon these fibres altogether. It had been supposed that the faradic current caused contractions through these nerves, and hence when they were affected by the rheumatic poison this current would produce no effect whatever.

Dr. JACOBI further remarked that these cases were, as a rule, mild cases, those in which the nerve-substance itself was not affected, but the circulation, and hence a speedy recovery took place.

Dr. MITTENDORF referred to his experience with electricity in ophthalmic practice. In cases of paralysis following diphtheria, much more benefit had been derived from the faradic than from the galvanic current. The indirect current was also of marked benefit in cases of intense and disagreeable pain experienced by patients with weak internal recti muscles. According to general doctrines, perhaps the galvanic current would be indicated. On the other hand, in those cases which depended upon malnutrition of the optic nerve, cases of amblyopia due to excess of tobacco and alcohol and to the loss of blood, most benefit was derived from the galvanic current. He supposed the explanation was the influence produced upon the blood-vessels themselves, and consequently upon the nutrition.

THE PRESIDENT remarked that in amblyopia, asthenopia, etc., he had obtained little benefit from the use of electricity, and had about abandoned its use.

Dr. W. M. CHAMBERLAIN had derived decided benefit from the use of the faradic current in Bell's paralysis, but probably without feeling that he fully understood the differential indications for its use.

The paper was further discussed by Dr. LEWIS, who referred to certain cases of diphtheritic paralysis treated by electricity, and by Dr. JACOBI, who had used it in the treatment of strictures with entire satisfaction. In general, he always took pains to study the condition of nerve-degeneration, employing, after Erb, the galvanic current in cases in which there was nerve-degeneration, and the faradic current when nerve-degeneration was not present.

RESIGNATION OF THE STEWARD OF THE PENNSYLVANIA HOSPITAL.—Mr. William G. Malin, who has been for the last thirty-five years steward of the Pennsylvania Hospital, in the Department for the Sick, has tendered his resignation to the board of managers on account of failing health. He has served the institution long and faithfully, and has earned the esteem of all who have been brought in contact with him, as he has commanded universal respect. For many years he acted as librarian to the institution, and he compiled the first catalogue of the medical library.

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REVIEWS AND BOOK NOTICES.

MICROSCOPICAL MORPHOLOGY OF THE ANIMAL BODY IN HEALTH AND DISEASE. By C. HEITZMANN, M.D., late Lecturer on Morbid Anatomy at the University in Vienna, Austria. With 380 Original Engravings. 8vo, pp. 849. New York, J. H. Vail & Co., 1883.

It is quite impossible, in the space at our disposal, to give a critical review, or even an adequate notice, of this extensive and meritorious work, written by Dr. Heitzmann and his pupils. We can only allude to its contents and to some of its features which more particularly impress us. The section on "Methods," by Dr. Heitzmann himself, includes directions for the preparation and study of tissues. They are those which are usually practised to-day, and are, generally speaking, a safe guide to the worker. We would not infer, however, that Dr. Heitzmann has had much experience with what he terms "manifold staining," for, while the instances may not be very numerous where it is of advantage, such instances do occur, and any one who has seen the exquisite preparations by Dr. J. Gibbons Hunt, prepared in this manner, will admit it. We are more in accord with him in what he says against the projecting of images on screens by complicated apparatus, and on the photographing of specimens, although these are also, at times, useful.

In the second section, Heitzmann deals with "the general properties of living matter," opening the subject by a paragraph on its chemistry. He adopts the term "plastidule" for the molecule of living matter, "the smallest particle, which can never be seen, even by the highest magnifying power,"—the term "plastid," suggested by Elsberg, being retained for the "cell." There can be no objection to the former word, as it is desirable to have a special term for the organic molecule to distinguish it from the "atom" of inorganic matter. Motion and reproduction are the distinctive properties of living matter.

The "arrangement of the living matter in protoplasm," and "phases of development of living matter," are reprints of papers published in the German by Heitzmann in 1873. The latter is based upon a study of amœba, cartilage cells, and bone corpuscles, from which he concludes that the protoplasm shows differences according to age; that the youngest protoplasm is structureless with our present means of demonstration, and that the first differentiation is an accumulation of liquid in vacuoles, owing to which the living matter assumes the shape of a frame-work; still later a net-work results which occupies its peripheral portion, the central or nucleus remaining homogeneous; later still the nucleus is differentiated into a frame-work and reticulum, leaving smaller compact centres, the nucleoli. Heitzmann says "the present generation of histologists will very probably never realize the harm done by the misnomer 'cell,' so firmly established during the last forty years;" and the proposition to the proof of which all his energies are directed is that there is no such thing as an individual cell in the tissues, as all cells prove to be joined throughout the organism, and what was formerly thought to be a cell is, in his present view, a node of a reticulum traversing the tissue. We have not space to consider this proposition, *pro* or *con.*, and must refer our readers to the volume for the argument. To one, however, who has studied and, as it were, handled cells, or at least the lumps of living matter which have been so long called cells, it must be a very convincing argument which will prove to him that it is not a distinct physical element. Besides substituting the word "plastid" for cell, he adopts that of "bioplasson" for "protoplasm," a change also suggested by Elsberg.

In the matter of diagnosis by the microscope Dr. Heitzmann claims for it extraordinary powers,—powers which if claimed by most physicians would stamp them as unpractical enthusiasts. He claims to be able to distinguish the "excellent," the "good," the "middling good," and the "poor" constitution by peculiarities of the pus and white blood-corpuscles recognizable by powers of from five hundred to eight hundred diameters; "to be acquainted with the anatomical features characteristic of tuberculosis, recognizable not only in single corpuscles, but from the peculiar aspect of the colorless corpuscles in every fresh drop of blood;" that life-insurance should be based upon microscopical examination as well as auscultation and percussion; and that marriages should be allowed, in doubtful cases, only upon the permit of a reliable microscopist. Surely such claims by almost any one else would be set down as outright quackery. But let him not be judged before a trial. There are certainly others competent to verify or deny such pretensions; and a hundred workers should at once turn their microscopes to this field with a view to settling the question. Should Heitzmann prove correct, Koch's discovery of the so-called Bacillus tuberculosis is trifling in importance, compared to his. Should he be wrong, his reputation as an interpreter of appearances will be forever shaken.

Heitzmann's ideas as to the importance of the pencil to the microscopist are undoubtedly correct, and are well sustained by the admirable and seemingly accurate illustrations to the various papers which make up the book. Elsberg's paper on the Structure of Blood-Corpuscles, Heitzmann's on the Tissues in General, Heitzmann and Schöney on Connective Tissue, Heitzmann and Holbrook on Muscular Tissue, Heitzmann on Nerve Tissue,

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Epithelial and Endothelial Tissue, including the vascular and lymphatic systems, are complete and superbly-illustrated papers,—in fact, masterpieces. The same may be said of the paper on Inflammation.

The section on Tuberculosis is a translation of a paper published in the German by Heitzmann in 1874 in the *Wiener Med. Jahrbücher*, to which he says he has little to add. We are inclined to think some additions might have been made which would have given it greater completeness.

The subject of "Tumors" is discussed by Heitzmann himself, and he claims only to present the outlines of oncology based upon the study of actual specimens in his own laboratory. He adopts a histological basis of classification, and illustrates by excellent drawings many varieties of tumors. He prefers the term myeloma to sarcoma. The sections on the Skin, Digestion, Respiratory and Urinary Tract, are treated by the author in the main, while certain sub-subjects are handled by his pupils. Bödecker furnishes an exhaustive article on the Teeth, also well illustrated, and Dr. Frank Abbot one on Caries. Millard has an excellent and well-illustrated section on the Minute Anatomy of the Epithelia of the Kidney, an abstract of his paper published in the *New York Medical Journal* for June, 1882, and Alfred Meyer another on Acute Inflammation of the Kidneys. The urine is treated by Heitzmann himself; also the male and, in part, the female genital tract, to which Jeannette B. Greene, M.D., adds "Microscopical Studies of the Catamenial Decidua," and J. W. Franke, M.D., furnishes a contribution to the History of the Development of the Human Decidua.

Whenever Heitzmann confines himself to the description and delineation of appearances found under the microscope, he is, in our opinion, unsurpassed. In his reasoning and deductions, we confess, he is, to say the least, eccentric, if not visionary. But the volume is a truly creditable one to all concerned in it,—is, indeed, a great work. It is a storehouse of facts valuable alike to the practical physician and the teacher. On the other hand, on account of its special character and the high powers invariably employed, it is hardly suitable as a working guide for students. J. T.

LEGAL MEDICINE. By CHARLES MEYMOTT TIDY, M.D. New York, William Wood & Co., 1882.

This work, in the form in which it lies upon our table, is one of the well-known Wood's Standard Medical Authors series, and abounds in all the evidences of cheapness which mark that well-known series,—a cheapness which may well be pardoned when the small cost of the publications to the profession as well as to the publisher is remembered. We have carefully looked through the two volumes, and find that they are based upon much careful work, are well put together, and constitute a valuable contribution to the literature of the subject. The great number of illustrative cases lends a special interest to the various chapters. The sin of the author—if he have any—is rather that of omission than that of commission. What is present is good enough, but what is away is missed badly. Only a part of the ground is traversed. Testamentary capacity, and, in fact, all medico-legal questions connected with mental states or acts, are ignored. Nothing whatever is said about rape, bastardy, and various other important matters. A line in the preface leads us to suspect that in these volumes (or this volume, as it was in the original English edition) the author has only in part carried out the task he has set himself, and that in a second publication he expects to complete his undertaking. In other words, we judge that Dr. Tidy is trying the experiment of publishing a two-volume work, one volume at a time. We trust that this is so, and that on some future occasion we may announce the completion of the enterprise.

A MANUAL OF HISTOLOGY. By THOMAS E. SATTERTHWAITE, M.D. New York, William Wood & Co., 1882.

This manual is a second edition of a well-known book, but does not seem to be a second edition in the usual sense of the work, but a reprint from stereotype plates which have had errors in them corrected, with the addition of an appendix containing discoveries made since the date of the first publication.

GLEANINGS FROM EXCHANGES.

THE BACILLUS IN PHTHISICAL SPUTA.—After giving in detail the recent methods of detecting bacilli in sputa, proposed by Koch and Ehrlich, *The Medical Times and Gazette* considers especially a report (*Berl. Klin. Wochen.*, No. 45) made by Balmer and Fraentzel, in which are communicated the results of observations upon one hundred and twenty cases where the sputa were examined. It is claimed that not only does the bacillus thus discovered clinch the diagnosis of phthisis, but the characters of the lowly organisms are a guide to the sort of case and to the prognosis. Where the find of bacilli is large, and the organisms are well developed, we are concerned with a severe case of tuberculosis, and the prognosis is proportionately bad. The number of bacteria detected in the tubercular sputa of an individual case is not constant; it waxes and wanes with the disease, being most numerous when the destructive processes are at their worst, and reaching its maximum *sub finem vitæ*. Sometimes the microzymes are generally disseminated in the sputa; sometimes they are arranged in groups; sometimes they

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are plenteous, and sometimes scarce; and they may be discovered when the morbid process is very chronic, or even at a standstill, although then their numbers are much thinned. In rapidly-progressing cases the formation of spores is seen to great advantage. These are facts and inferences brought to light by investigations on one hundred and twenty various phthisical individuals. The presence, numbers, and appearances of the bacilli in the expectoration will be seen to tally with the nature, course, and characters of the pulmonary mischief. The life-history of the bacilli, as manifested in the sputa, forms, as it were, a complete interpretation of the processes that go on in the lung, in the same fashion as a system of words is the counterpart of a train of ideas. Such results, we think, should *a priori* have been expected, if the notion that the micro-organisms are the cause of the affection be true. We suppose there can be no reasonable doubt that the observations and inferences therefrom are correct; but, that aside, it is quite possible that the evolution and involution of the bacteria in the sputa may proceed without there being necessarily a total causal relationship between the germs and the disease,—just as the noise from a cataract may increase and decrease merely as a companion to the varying mass of water rolling, without having anything to do with the cause of the variation in the quantity of water.

THE ABSORPTION OF NUTRIENT ENEMATA.—Dr. Charles L. Dana, of New York, communicates to the *Medical Record* the results of a series of experiments upon dogs, made to determine the physiological process by which nutrient enemata are absorbed. He finds that large injections forcibly administered *may* cause a "retrostasis," which will carry the material by the ileo-cæcal valve, and even into the stomach; moreover, that, in dogs, ordinary nutrient injections of two, three, or four ounces pass back some distance, and may even reach the ileo-cæcal valve, but do not go farther, the injection being carried back much better when the lower bowel is empty or comparatively so. He believes that the clinical cases are exceptional in which retroperistalsis occurs, and concludes that the process is usually effected by local absorption. The fact that the colon is very vascular and has a large supply of lymphatics confirms the view that it is not an excreting organ, but its function in man is that of absorbing: in solipeds it has a powerful digestive action. He observes that albuminous food, when injected, speedily undergoes chemical changes and decomposition. In some of the early stages of this process it is quite possible that the changed albumen passes into the surrounding vessels. Normal peptic digestion is only a decomposition with many stages in it, during some of which the albuminous matter is absorbed. It is not necessary that albumens be made perfect peptones before they can diffuse into the blood-vessels and lymphatics. Fats cannot be absorbed to any great extent in the colon or rectum. It is not necessary to inquire whether starches can be changed to glucose, since it is always possible to add some form of animal sugar to the enema if that be thought necessary. Milk and beef-tea are regarded as very nearly as effective as the expensive peptonized preparations for use in nutrient enemata, the value of which may be regarded as established both by physiological experiment and abundant clinical experience.

ALLOCHIRIA.—A peculiar sensory disorder, in which peripheral irritations upon the surface of the body or extremities are felt as if coming from the opposite side,—that is, a sensory impression is referred not to its proper locality, but to a corresponding one on the other half of the body,—was termed by Obersteiner, of Vienna, "allochiria" (ἄλλος, χείρ). It has been noticed most frequently in cases of locomotor ataxia, though not restricted to cases of spinal sclerosis, and has been found to be associated with disease, inflammatory in character, of the posterior horns of gray matter. Anæsthesia is not a necessary concomitant of allochiria; but where there is a lesion of both posterior horns at a different level, there may be anæsthesia upon one side and allochiria upon the other. The character and symptoms of this peculiar nerve-disorder have recently been considered in a paper read before the New York Neurological Society by Dr. Hammond, in which the symptoms, morbid anatomy, and mode of production of the disease are explained by references to the physiology of the gray matter of the cord and of the mode of perception of sensory impressions.—*New York Medical Journal.*

CAFFEINE IN HEART-DISEASE.—Caffeine has been largely employed as a diuretic, but it has been little used for its action on the heart. Lépine asserts that it is capable of producing the same effects as digitalis, over which, in some cases, it has decided advantages. It is, however, necessary to employ it in large doses, from sixty centigrammes to two grammes per day. The effect is more rapid than that of digitalis; in less than twenty-four hours the pulse will fall from 160 to 100 or 80 per minute, and the force of the heart's contractions is increased in just the same way as with digitalis. Caffeine is, however, better borne, and seems to be eliminated more rapidly, than digitalis. Among its inconveniences, however, are the occasional production of insomnia and a nervous condition which renders it necessary to suspend it. M. Lépine has never given it for more than ten days. Another objection is its very high price. A Paris physician, M. Huchard, has also praised it highly in the same cases, and in similar doses, especially for its

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diuretic effect. Coffee is, it may be noted, an old remedy. Zwinger recommended it in 1725 for dropsy, and Honoré in 1846 for albuminuria.—*Lancet.*

GIACOMINI'S PROCESS OF PRESERVING BRAINS.—The fresh brain, in its membranes, is placed in a saturated solution of chloride of zinc, in which it floats, and must be turned over two or three times a day. After forty-eight hours, the membranes must be removed, without taking the organ out of the fluid. Allow it to remain in this fluid until it ceases to absorb, as shown by its remaining at the same level, and not sinking; then remove it, and plunge it in alcohol of commerce, where it must remain for a period of not less than twelve days, during which time the spirit should be changed two or three times. When removed from the alcohol, it is to be placed in glycerin of commerce, to which one per cent. of carbolic acid may be added. At first it floats in the glycerin; but, as the spirit evaporates, and the glycerin penetrates it, it gradually sinks to the level of the surface of the fluid, when it may be removed, put aside to dry for a few days, and, lastly, coated with several layers of gum-elastic varnish, or marine glue diluted with a little alcohol.—*British Medical Journal.*

POISONING BY TEN GRAINS OF MORPHIA TREATED SUCCESSFULLY WITH ATROPIA.—A woman having swallowed ten grains of morphia was found one hour later completely unconscious, with feeble and irregular, sometimes gasping, respiration, face flushed and cyanotic, eyes injected, pupils moderately contracted, pulse 100. After a few irregular inspirations there was an interval in which breathing entirely stopped for ten or fifteen seconds. A hypodermic injection of atropia (one-thirty-fifth of a grain) was given by Dr. E. Stuver (who reports the case in the *Medical News*), and an hour later another was given of one-fortieth of a grain. After each injection an improvement in breathing and pulse took place, but unconsciousness did not leave her until another hour had passed. With the exception of a sick headache the next morning, she recovered rapidly and without further unfavorable symptoms. The patient was in the seventh month of pregnancy, but did not abort. This case, while it shows that atropia is a useful antidote to morphia, also emphasizes the view that the size of the pupil does not indicate the gravity of the toxic effect of the morphia.

APOMORPHIA IN ACUTE POISONING.—Attention is called by Dr. Routh to the use of this valuable agent in cases where prompt emesis is desired. Two instances are reported—one of oxalic-acid- and the other of alcohol-poisoning—in which hypodermic injections of (one-fifteenth to one-tenth of a grain) apomorphia produced emesis in about three minutes. The convenience of this mode of emptying the stomach over the use of the tube is evident; moreover, a stomach-pump is not always to be had. [The certainty and rapidity of the action of the drug are especially useful in all cases where it is desirable to produce vomiting without introducing the agent by the mouth. As regards its safety, some cases of serious collapse have been reported following the administration of the usual dose. A certain amount of care, is therefore, to be advised.]

REMOVAL OF GOITRE, WITH A FATAL RESULT.—In the *Deutsche Med. Zeitung*, No. 42, an abstract of a case of extirpation of a goitre, performed by Von Riedel, is given, which is unusual in the fact that symptoms supposed to be due to some affection of the vagus occurred soon after the operation. Aphonia, with rapid pulse and dyspnœa, set in within two hours after the operation. Tracheotomy failed to relieve the dyspnœa. Four days later pneumonia was detected, and the patient succumbed. At the autopsy the recurrent nerves were found to be embedded in blood-clot; there was also commencing suppurative inflammation of the mediastinum and lobular pneumonia. Von Riedel puts the vagus symptoms down to the use of a two-per-cent. solution of carbolic acid with which the wound was washed out. He has seen one other similar case. The facts of the case are interesting, but we think the explanation not free from objections.—*Medical Times and Gazette.*

CENTRAL AMBLYOPIA IN DIABETIC PATIENTS.—At a late meeting of the Ophthalmological Society of the United Kingdom, four papers were read upon the amblyopia of diabetics, containing notes of cases. Nine cases were referred to by Dr. Edmunds and Mr. Nettleship of failure of sight with central scotoma in the subjects of diabetes, without observed ophthalmoscopic changes. Most of the cases were smokers. The optic nerve of one of these, in which no altered ophthalmoscopic appearances were detected, showed, upon section, changes extending through the length of the nerve, but limited to a central group of fibres, in which there were observed thickening of the connective tissue and degeneration of the nerve-filaments.

THE TREATMENT OF HYDRARTHROSIS.—In a Paris thesis, Dr. Delbreil recommends rest in bed, blisters, and compression in the treatment of hydrarthrosis. Aspiration should be performed in obstinate cases; and if the effusion still persists, threatening the integrity of the joint-structures, iodine injections are suggested. In addition, antirheumatic treatment will be sometimes needed; and, in all, hygienic means play a prominent part.—*Bulletin Général de Thérapeutique*, September 30, 1882.

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MISCELLANY.

THE BILL PROPOSED BY THE BOARD OF SPECIAL COMMISSIONERS.—The special commissioners appointed by Governor Hoyt to inquire into the treatment of the insane in the State have reported a bill to the Legislature. The bill creates a Central Board, to have supervision over places where insane persons are under treatment, said board to be composed of the Board of Public Charities and three additional members, appointed by the Governor, one of whom shall be a member of the bar, and another a physician, both of ten years' standing and practice. In consultation with the Chief Justice of the Supreme Court and the Attorney-General, the Committee on Lunacy is to act as a licensing board. All pay places, where insane patients are treated, must take out license under regulations prescribed by this committee for the conduct and control of such establishments. The committee have power to enforce their regulations by suspending the license upon disregard of their rules, and such withdrawal of license lays the offending parties open to a charge of misdemeanor, and any institution of the kind that fails to take out a license commits a misdemeanor. Actions for damages can also be brought against them. Medical records and "case-books" are to be kept in such establishments, with weekly and other periodic records and notes, thus preventing inmates of long standing from going out of sight.

An important section of the bill is that which requires one notice of the fact to be mailed to the Committee of Lunacy and another to the Secretary of the Board of Visitors for the county within forty-eight hours after the admission of a patient into any such establishment. The committing physicians must be medical practitioners of five years' practice, and their certificate must be given within a week of the commitment. A medical practitioner, chosen by the patient or his family, and with the sanction of a judge of a court of record, shall have access to and visit the said "lunatic" at reasonable hours. Boards of Visitors for each county are to be appointed by the Committee of Lunacy, to act in conjunction with them. Women may serve on these boards. Every institution in the State that comes under the provision of this law is to be visited once a month by a county visitor or committee member, once in six months by a committee of three, one of whom must be of the Lunacy Committee, and once a year by a majority of the committee. Any such institution that does not take out a license or fails to comply with its provisions is liable to the charge of misdemeanor. The act deals also with the criminal insane, and provides that such persons, when pronounced cured, shall be turned over to a place of custody, and not discharged upon the community without legal release. The release of the Committee of Lunacy for all other cured cases is to be equivalent to, and, in the absence of release by the superintendents of such asylums, would actually be, a sufficient discharge.

KAIRIN.—A new alkaloid, called "kairin," is about to appear in the drug-market, for which are claimed antipyretic properties, unaccompanied by the slightest tendency to produce local irritation. It is proposed as a substitute for chinoline, itself a substitute for quinine. Drs. Fischer and Wilhelm König, of Munich University, assisted by Professor Filehne, of Erlangen, have found that those hydrides of chinoline, in which the nitrogen atom is in direct combination with the carbon atom of a methyl group or of another alcohol radical, all possess more or less the properties above mentioned as pertaining to kairin.

Kairin is the name given by the authors to oxychinoline-methyl-hydride.

Kairin hydrochlorate forms a light grayish-yellow crystalline powder. It is soluble in water, and has a bitter, aromatic taste.

The authors have found that, beginning with doses of from 0.3–0.5 to 1.0 gm. of the above salt, and gradually increasing the dose 0.5 gm. each time, the doses being repeated at intervals of an hour, after the fourth dose the body-temperature may be reduced to 37° C., or even 36.5° C., without any symptoms of local irritation; and they hope that the substance will prove useful in all forms of fever. —*The Druggists' Journal.*

THE ETHER SPRAY AN IMMEDIATE CURE FOR NEURALGIA.—Dr. McColganan extols the value of the ether or rhigolene spray for the instantaneous relief principally of facial neuralgia. He first had occasion to observe its good effects upon his own person, he having suffered greatly from facial neuralgia. Since curing himself, he has had occasion to test its efficacy in about twenty cases. The result was invariably a most gratifying success. In many instances a permanent cure was established. He attempts to explain its action by supposing a complete change to take place in the nutrition of the affected nerve in consequence of the intense cold acting as a revulsive.

A ROVING correspondent, in a letter to the London *Lancet*, says, "In Philadelphia there are practically no tenement-houses, as here land is plentiful, and it is the fashion for every man to own the house in which he lives. Hence, poverty is rare, thrift is everywhere apparent, and the large number of small houses or pretty cottages fills the visitor with astonishment. It would be a grand thing if every father of a family could own his own house, as he does in Philadelphia. This is something for us to aim at accomplishing where possible, and its general adoption would be indeed an approach to the mil-

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lennium. It is not possible to obtain this in England, but in Ireland and America the general adoption of this Philadelphia system is greatly to be desired."

THE announcement of the death of Dr. George M. Beard, the well-known medical writer and specialist in diseases of the nervous system, which occurred in New York on the 23d ult., will cause a general feeling of regret at the loss sustained by the profession by his early demise. It was found that he had perished of pneumonia of septicæmic character, resulting from a carious tooth,—in other words, of overwork. Dr. Beard was only forty-three years of age. He was a member of many scientific societies, and was an original thinker, a frequent contributor to medical literature, and generally known as a most industrious worker.

A RECEPTION was given to Dr. John L. Atlee, of Lancaster, Pa., and Dr. Alex. J. Stone, of St. Paul, Minn., the President and Vice-President of the American Medical Association, on the 2d inst., by Dr. John V. Shoemaker, at his residence in this city, which was largely attended. Many representative members of the profession from this city were present, as well as some distinguished guests from other cities.

AFTER this session those colleges which do not require a preliminary examination will be under the ban of the State Board of Health of Illinois, and their graduates will be obliged to undergo an examination before the Board before they will be allowed to practise medicine in that State.

THE *Official Messenger* publishes a decision of the Medical Council of St. Petersburg condemning the homœopathic remedy for diphtheria, which has lately been tried there in the hospitals of the Red Cross Society, as false and dangerous.

THE THIRD CORPUSCLE OF THE BLOOD.—Mrs. Ernest Hart, in the *London Medical Record*, publishes a criticism upon Dr. Norris's work on the physiology of the blood. She claims that the "invisible corpuscle" described by him is really only a red corpuscle decolorized.

TRUTH THROUGH ERROR.—A busy doctor sent in a certificate of death the other day, and accidentally signed his name in the space for "Cause of Death." The registrar says he wishes the profession would be as accurate generally.

ACCORDING to the returns now made up, 3340 students matriculated in Edinburgh University last year, being an increase of 103 on the preceding year. Of these, 1730 were medical students.

INTERNATIONAL MEDICAL CONGRESS.—We have been officially requested to call the attention of our readers to the fact that the eighth session of the International Medical Congress will be held in Copenhagen, Denmark, from the 10th to the 16th of August, 1883, inclusive.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY FROM JANUARY 27, 1883, TO FEBRUARY 3, 1883.

HEIZMAN, CHARLES L., CAPTAIN AND ASSISTANT-SURGEON.—Will be relieved from duty in the Department of the Columbia, and ordered to report to the commanding general, Department of the South, for assignment to duty. Paragraph 10, S. O. 20, A. G. O., January 24, 1883.

KILBOURNE, H. S., CAPTAIN AND ASSISTANT-SURGEON.—Leave of absence for one month, with permission to apply for an extension of two months, is granted. S. O. 218, Department of Dakota, December 21, 1882.

KILBOURNE, HENRY S., CAPTAIN AND ASSISTANT-SURGEON.—The leave of absence granted December 21, 1882, Department of Dakota, is extended two months. Paragraph 3, S. O. 24, A. G. O., January 29, 1883.

MUNDAY, BENJAMIN, FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Assigned to duty at Fort Klamath, Oregon. Paragraph 3, S. O. 195, Department of the Columbia, December 29, 1882.

PAULDING, H. O., CAPTAIN AND ASSISTANT-SURGEON.—Granted leave of absence for one month, to take effect on or about the 1st of February proximo. Paragraph 1, S. O. 11, Department of the Platte, January 27, 1883.

PRICE, CURTIS E., CAPTAIN AND ASSISTANT-SURGEON.—Detailed as member of Army Retiring Board to convene at Fort Porter, Buffalo, New York, February 2, 1883. Paragraph 1, S. O. 21, A. G. O., January 25, 1883.

SKINNER, JOHN O., CAPTAIN AND ASSISTANT-SURGEON.—Granted leave of absence for one month. Paragraph 2, S. O. 5, A. G. O., January 6, 1883.

SKINNER, JOHN O., CAPTAIN AND ASSISTANT-SURGEON.—Will report in person, at the expiration of his present leave of absence, to the Surgeon-General, for duty in his office. Paragraph 10, S. O. 20, A. G. O., January 24, 1883.

SPENCER, WILLIAM G., CAPTAIN AND ASSISTANT-SURGEON.—The leave of absence on surgeon's certificate of disability granted September 20, 1882, is extended three months on surgeon's certificate of disability. Paragraph 4, S. O. 16, A. G. O., January 19, 1883.

TAYLOR, MARCUS E., CAPTAIN AND ASSISTANT-SURGEON.—Will report in person, at the expiration of his present leave of absence, to the commanding general, Department of the East, for assignment to duty. Paragraph 10, S. O. 20, A. G. O., January 24, 1883.

WOOD, MARSHALL W., CAPTAIN AND ASSISTANT-SURGEON.—Will be relieved from duty in the Department of the East, at the expiration of his present leave of absence, and will report in person to the commanding general, Department of the Columbia, for assignment to duty. Paragraph 10, S. O. 20, A. G. O., January 24, 1883.

WYETH, M. C., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Is relieved from duty at Fort Snelling, and will proceed to Fort Stevenson, Dakota Territory, and report to the commanding officer of that post for duty. Paragraph 1, S. O. 15, Department of Dakota, January 18, 1883.

WATERS, WILLIAM E., MAJOR AND SURGEON.—Detailed as member of Army Retiring Board to convene at Fort Porter, Buffalo, New York, February 2, 1883. Paragraph 1, S. O. 21, A. G. O., January 25, 1883.

WOOD, MARSHALL W., CAPTAIN AND ASSISTANT-SURGEON.—Granted leave of absence for one month. Paragraph 3, S. O. 4, Department of the East, January 8, 1883.

WOOD, MARSHALL W., CAPTAIN AND ASSISTANT-SURGEON.—At expiration of present leave of absence, relieved from duty in the Department of the East. Paragraph 1, S. O. 15, Department of the East, January 26, 1883.

JOHNSON, R. W., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Granted leave of absence for one month. Paragraph 2, S. O. 4, Department of Dakota, January 5, 1883.

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PHILADELPHIA, FEBRUARY 24, 1883.

ORIGINAL LECTURES.

CLINICAL LECTURE

ON SPINAL CURVATURE, WITH REMARKS ON ITS PATHOLOGY AND TREATMENT.

Delivered at the Pennsylvania Hospital, Philadelphia, January 13, 1883,

BY THOMAS G. MORTON, M.D.,
One of the Attending Surgeons.

GENTLEMEN,—I have shown the class on several occasions clinical illustrations of the various forms of congenital club-foot. The little patient before you is simply an additional instance: I show him to you this morning in order to point out certain pathological features which are of special importance in connection with some cases of an analogous kind which I will bring before you presently. I have already told you in a former lecture that in this affection the deformity is really the result of palsy of certain muscles or muscular groups, and as a consequence the stronger muscles contract while the weaker muscles yield, producing the several varieties of club-foot according to the particular muscles involved. The paralysis is of spinal origin, and may occur either *in utero* or in infantile life, but, whether congenital or acquired, the explanation is the same: if the paralysis is extensive, the limb will hang entirely helpless, as in infantile palsy; but if only slight or partial, certain muscles alone will be affected, and some deformity will be produced. In such cases, I have previously told you, we expect to have a certain amount of permanent atrophy or retarded development in the affected limb, not limited to the muscles. The treatment must be conducted with a view to restore function; instead of cutting tendons I stretch the foot, and afterwards keep up passive motion. Beginning the manipulations at birth or shortly afterwards, I instruct the mother or nurse, or some one in attendance, to carry out certain movements,—bending the joint in the opposite direction to that of the deformity, making a calcaneo-valgus out of an equino-varus, for instance,—stretching the contractured muscles, and exercising the weak ones. This should be carried out every day, carefully moulding the foot, making it pliable, and gradually overcoming the deformity.

This child is four months old; it had double equino-varus. The mother has persistently followed my directions, stretching the foot daily. The photographs I now send around the class show clearly how the foot should be stretched. Standing at the side of the patient, the foot is grasped by the hand of the attendant, the thumb pressing upon the prominent portion of the tarsus, and the foot then forcibly everted, supposing it to be a case of varus, converting it into a valgus, lifting the anterior part of the foot up and at the same time allowing the heel to go down. As I do this the child does not cry, showing that there is no pain, and that the treatment has been faithfully carried out. The foot has been treated this way for about two months, and the deformity is now sufficiently corrected, so that we shall apply an apparatus,—a well-made shoe with the inside ankle-strap, lacing up from the toes, and steel bands on the side to the knee. Each morning, after the foot has been stretched, this modification of Scarpa's shoe is to be put on, and worn during the day, removing it at night. By this method you can generally get the best results, and cure any case of congenital club-foot.

I shall show you now a few cases which I happen to have under my care, illustrating forms of spinal disease. We do not, as a rule, have many of these cases at one time under treatment at this hospital, since they generally seek relief at some of the special hospitals; but, as I have now several in the wards, I thought it might interest you to bring them before you and discuss with you some points in pathology and treatment.

You know I have spoken of club-foot as being essentially a paralysis, or nervous weakening, the deformity being caused by the stronger muscles pulling the foot to one side on account of the yielding of the weaker muscles. Now, besides congenital and acquired club-foot, we have other disorders caused in the same way. Infantile palsy may be followed by acquired deformity, and club-foot may thus be produced; for if, instead of the entire extremity being weak and helpless from the disease, we have the paralysis limited to the extensors or flexors of the foot, this deformity will result. As I have repeatedly shown you, we

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have always atrophy associated with it. These features are also present in lateral curvatures of the spine, to which I will now direct your attention, and I hope to convince you that in most cases the curvature is due to the same pathological causes as those seen in infantile palsy and club-foot.

We generally find curvature coming on in early life, and it may involve any part of the spine. I do not think that there is much difference in susceptibility as regards sex; it occurs about as often in girls as in boys. Where it comes on later in life, it is generally owing to certain changes going on in the body, which do not commonly act in childhood; for instance, there may be shortening of a limb, muscular spasm, rachitis, also growths in the abdominal cavity or elsewhere, which by their weight tend to pull the body to one side, and the patient, by placing himself in the most comfortable posture, acquires spinal curvature. As a result of occupation, we may also find more or less spinal curvature. Here is a specimen, a portion of a skeleton; it is the spinal column and thorax of a patient which I obtained while resident in this hospital. He was an organ-grinder, and carried a very heavy instrument upon this side of the body, which favored the development of this marked curvature; possibly it was entirely responsible for it.

Looking at this vertebral column, which naturally has the antero-posterior curves, you observe that the thirty-one pairs of nerves, which in the natural state pass out of their intervertebral foramina, may, as the result of involvement of their trunks in disease, have their function impaired, and as a result there may be more or less palsy of the muscles to which these nerves are distributed. It is my opinion that lateral curvature is generally caused by weakness or disease of some of these nerves. These large muscular masses upon each side of the spine exert a powerful action upon the movements of the trunk, and in keeping the body erect. Should one side be weaker than the other, or be deficient in innervation, the opposing stronger muscles will overpower the weaker ones, and curvature follow. As a consequence of curvature we find the chest-cavity decidedly changed. The lung is pressed upon in the contracted chest, the heart is displaced, and their relations disturbed. As a result of the pressure upon the heart, we may have palpitation, functional disturbance, irritable heart, and symptoms of disturbed circulation. All of these patients also complain of shortness of breath. In every case of lateral curvature there is also a coincident curve of the spine in another portion of its extent, in the cervical, dorsal, or lumbar region. This one point is to be remembered: *whenever we have a curve in one portion of the spinal column, there always exists a compensating curve in some other portion.* The first curve is pathological, due to disease; the second is physiological, and is compensating or accommodative. In dorsal curvature, for instance, the first curve will have its convexity to the weaker side, and its concavity to the stronger side; but below the curve is in the opposite direction.

Not only do we have this lateral curve above and below, but we also have more or less of rotation or twisting of the vertebral column in addition; the bodies of the vertebræ are rotated upon their axes to a greater or less degree, thus producing three curves, the pathological, the compensatory, and the rotatory.

Here is a good case to illustrate this point. It is a woman about 35 years of age. You notice that the spinous processes bow over very much to the right side; the ribs upon this side likewise bulge out at their angle, just as you observed in the specimen. As I indicate the middle line of the back, you see that the spine takes a marked curve in the dorsal region.

Notwithstanding the paralysis causing the deformity being often due to pressure upon the nerve-trunks, I must also tell you that I believe, in a large majority of cases, the affection is due to the same cause as infantile palsy, impaired nutrition, and as a result we have the same atrophy of muscles following it. By careful measurement you will always find a difference in development of the muscles upon the affected side. This arm is atrophied as compared with that upon the opposite side. The same state of affairs extends elsewhere in the body: the leg also is smaller than its fellow. In this girl's case the convexity is towards the right side, the powerful muscles of the left side, remember, producing the deformity by causing the spine to yield. Upon examination the middle of the right arm measures eight inches in circumference, while the left measures eight and a half inches. This is an old case. The woman has used both

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arms in working for her living, so that they have been increased by exercise. Therefore the difference is not so great as it would otherwise be; but a difference exists, and will continue during the woman's life. The same result has been shown to you following hip-joint disease and spinal paralysis, produced in all by nerve-disorder. It is a rule which cannot be overcome, it is a principle that extends throughout the affected side, and we thus find a feeble arm and feeble leg as a result of or accompanying lateral curvature. You will also notice it in front of the body. The mammary gland upon the weaker side is always less developed, so that after examining the limbs and breasts you can very easily determine in which direction the curvature exists. You see it here! Notice the pathological curve in the dorsal region, and see the compensating curve in the opposite direction below.

Here is another point: if you measure the difference between the armpit and the spinous processes, it is less on the weaker side than upon the opposite. The right looks like the fuller, stronger, and better developed side, from the bulging of the ribs, but in fact it is the weaker, and shows the deformity caused by the curvature and rotation.

Now, in this girl's case the spine presents this appearance. (Illustration on blackboard.) We should have the spinal column in the position indicated by the dotted line; but, as you see, it is curved first towards the right, and secondly towards the left, the stronger muscles being upon the concavity of the curve above. Now, when you consider that the nerves coming from the spine are pathologically the same as seen in infantile palsy, you can understand the cause of the atrophy of the muscles and general weakness so commonly observed.

Here is a man 32 years of age. Since he was seventeen he has had this condition of lateral curvature, which has been gradually increasing. This is an excellent example. The curvature is exactly the same as in the girl I showed you a few moments ago. Commencing with the last cervical vertebra and extending to the lower dorsal is a decided lateral curvature to the right side. The ribs are almost at an acute angle, so great is the deformity. The accommodative curve, as you see, runs from the end of the first curve far over to the left upon the healthy side. He thinks his body is a little longer on this side. See how the right shoulder has been pushed up by the distortion of the chest!

It is a remarkable fact that as soon as a patient begins to show any of these symptoms it is usual to seek the support of a brace of some kind. Now, the objection to their immediately being applied is that they not only increase the weight the patient must carry, but also in the early stages of curvature a patient can be better treated by general means, by rest, diet, general hygiene, etc. Unquestionably a brace is all-important, after improvement in the general health. This brace is heavy,—the man is large, and can bear a heavy brace; but to a child presenting incipient curvature it might do injury: so that the early application of a brace may do more harm than good. This patient, however, has reached such a stage that he could not do without one.

In the mechanical treatment of these cases I use a brace (Figs. 1 and 2) which I now show you; it is one made for me by Kolbe, and I have employed it at the Orthopedic Hospital for fifteen years, and am satisfied with it. The apparatus must rest upon some point of support; in this form it has a band which embraces the pelvis just above the trochanters, but not too far above, or it will slip up. Then from this arise two lateral steel supports, one on each side of the spine, and two more externally, which reach to the axillæ and to which crutches are applied, so as to extend the spine. Straps go over the shoulders so as to make the brace firm and to throw the chest forward. In advanced cases we only aim to make the patient comfortable. I will show you this again when I speak of the treatment of these cases.

FIG. 1.

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Both sets of muscles may be affected, but one more strongly than the other. Under an anæsthetic, spasmodic curvature disappears, and the diagnosis is readily made; the spine may thus be straightened and the curvature reduced. In this next case it was. Here is a splendid example shown in the photographs. I think I showed you this case last year. The boy was so much bent to the side that the top of his head touched the ground. I extended this patient under ether, and applied a felt jacket. Examination now shows measurement on both sides alike. The cause was obscure; there was no pain connected with it; the boy's general health was perfect, and it was not connected with atrophy; but the spasm was connected with some form of cerebral or spinal irritation.

FIG. 2.

Now, I expected to have several other cases to show you, illustrating this particular form of disease, but will content myself with these in order to show you several cases of posterior curvature, different in pathology but coming under the same category as regards treatment.

We have now gone over, very briefly, the subject of lateral curvature, and now come to that of posterior curvature, which is a very common affection. As a rule, it is brought about by disease of the bodies of the vertebræ, generally tuberculous in character. If you will examine the history of the patient, you will generally find a tuberculous element. In cases I show you to-day this is eminently so.

Here is a patient 9 years of age. He has suffered no injury. The mother's side of the family has a history of consumption, the grandfather died with "consumption of the throat." Here is a girl 4 years of age, "several members of the family died with consumption." The next case is 5 years old, "father died with Bright's disease, mother consumption." And so it goes on: in almost every case we get a clear history of tubercular disease.

In all these cases of posterior curvature, or Pott's disease, as it is called, because Percival Pott first accurately described it, the patient first complains of being poorly, he loses strength, has a poor appetite, has difficulty in walking, pains in the loins, but the disease may go on for months without being suspected. One of the common symptoms is that the child trips and falls without apparent cause. The child becomes pale, dislikes exercise, is easily tired, prefers to lie down; the whole character and behavior of the child are different from those of health. On examining the back you find a projection in the child's vertebræ; this is at first only a little bowing, but in more advanced cases is like a knuckle, where marked angular deformity is present.

Here is a second case illustrating posterior curvature. Lateral curvature, as I have just explained to you, is not accompanied by morbid changes in the bodies of the vertebræ; it is only the result of muscular action. When we come to posterior curvature, we find a disease of the vertebral bodies themselves. Tubercular material is deposited in them, they soften and break down, yielding to the pressure of the upper part of the body; deformity is the result; absorption of the diseased vertebræ may occur, and anchylosis follow. So that the deformity in Pott's disease is permanent because there is actual loss of substance in the spinal column.

When the bodies of the vertebræ are much involved it is quite common to have abscess follow, which may present in the cervical, dorsal, or lumbar regions; if the cervical vertebræ are affected, post-pharyngeal abscess may appear, which may produce serious results. This child has a small scar in the right lumbar region which was caused by abscess, and which, after it discharged pus and some small pieces of bone, closed up. When the discharge occurs in front, and the pus, following the course of the psoas muscle, appears in the vicinity of Poupart's ligament, it is called a psoas abscess. The latter may be confounded with inguinal hernia, but this error can easily be avoided by recalling the fact that abscess is always external to the great femoral vessels, while the canal for hernia is always internal. Thus we

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may have iliac, gluteal, lumbar, and psoas abscess in vertebral caries.

In the case I now show you the curvature is less marked than some you have seen. In this one the disease begins with the sixth dorsal and extends to the first lumbar vertebra. Fortunately, this child was brought under treatment in time, and we have succeeded in arresting the disease probably before softening has taken place. By the use of early and appropriate treatment, and subsequently by the application of a spinal support, the child has been spared the characteristic deformity so often seen.

In lateral curvature, as I have pointed out to you, atrophy appears on one side, but in posterior curvature this is not the case; there is no such difference between the development of the arms, legs, or mammary gland as in the other cases. The reason is that in the former there is disorder of the nerves, while this is caused by vertebral disease.

The second case has more deformity, because it shows a more advanced stage of the disease. This little boy has a slight bulge in the lumbar vertebræ. We learn that this came on rapidly. The child was brought to the Orthopedic Hospital suffering with lassitude and other symptoms which I have already referred to as early observed in Pott's disease. He was put at rest in bed, given a regulated diet, cod-liver oil, and phosphates, when his general health improved; a support was applied, and the child allowed to get out of bed, taking exercise very guardedly. By these means we have succeeded in arresting the disease.

It is very interesting to note how great an amount of change we may have in destruction of the vertebræ and spinal deformity, without the impairment of the structure of the spinal cord itself, or its functions.

This is a specimen, showing great angular deformity, which I obtained while resident here, in which the bodies of five vertebræ have been absorbed without any encroachment upon the spinal canal itself, and the cord was uninjured. So that in many of these cases, of children especially, the growth may be stunted in height, but the bodies will be well developed and vigorous. It occasionally happens, however, that the spinal cord becomes involved, or the inflammation extends to its membrane, so that paralysis follows; and I have at the present time a boy under my care, five years of age, with almost complete palsy of the lower extremities; but such an accident in the course of the disease is exceptional.

Now, sometimes, instead of the bodies of the vertebræ undergoing this degeneration, with softening and abscess, we may have a change of a more chronic kind, and we find anchylosis occurring without abscess. Sometimes we have deposits occurring around the spinal column, the result of inflammation of gouty, rheumatic, or other character, and, without loss of tissue, anchylosis results. This is shown by this young man, who has a stiff neck. He is able to go about and earn his living, but he cannot turn his head without moving his body. I was at first afraid that the disease was going on to the formation of abscess, and would cause trouble, but, fortunately for him, the disease was arrested, and anchylosis resulted. Upon examination, I find a good deal of osseous structure around the vertebræ, and much rigidity. Still, he has improved a good deal within the past four or five months. He can now move his head to either side to some extent. The rest of the spinal column is perfectly healthy.

With regard to treatment in cases of vertebral disease or posterior curvature, rest at first constitutes the most important point in the treatment,—rest upon the back in the horizontal position. Proper food and hygienic care are also essential elements to success. But prolonged rest for a child is to be deprecated: he needs fresh air, and may be carried out upon his mattress, and allowed to remain in the fresh open air. During this period a very light form of spinal brace can often be judiciously applied to keep the spine in a normal position. When the acute process is over, and the child is allowed to get up, he will need a firmer sort of spinal support to prevent the pressure from above crushing the vertebral bodies which have been softened by disease. We must therefore apply an apparatus to take off the weight of the upper part of the spinal column. The plaster jacket is useful and cheap, and answers a very good purpose; it may be also fixed with a head-rest. But the objection to this form of jacket is that it is difficult to get on and off; it presses upon certain parts, and may lead to ulceration before it is detected: especially in hot

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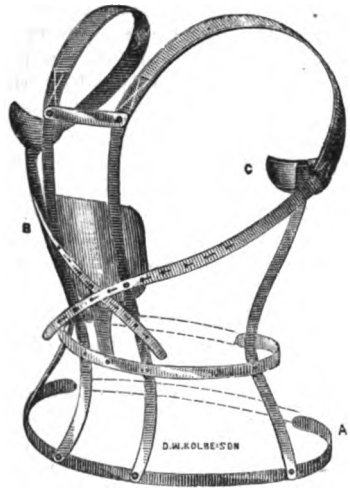
weather is this likely to occur: I have seen this more than once. As they cannot be removed for purposes of cleanliness as often as other forms of braces, they frequently become uncomfortable and unhealthy. In the first little girl I showed you, there was an ulceration upon the prominent portion of the spine the size of a dollar, which was not suspected until the jacket was removed. So that in all cases in private practice I prefer to put on the form of brace I have shown you. It is a frame of light bands of steel covered like a corset. In this skeleton frame (Fig. 3) you can see its construction, which I have already described. The lower steel band encircles the body just above the

Fig. 3.



trochanter, fitting so closely as to fit in between the trochanter and the crest of the ilium. The steel bands are well padded, and accurately embrace the body. In some instances I add a "hand," made of steel and padded, which makes pressure to any extent upon the feeble projecting side.

In order to prevent the shoulder-straps from irritating by their pressure as they pass around the armpit in front, I have had a slot made in the crutch through which the bands pass. All parts of the brace are well padded, and when finished it has the appearance of a corset. The uprights are made so that they can be lengthened as the child grows. I know of no brace which better fulfils the indications than this one.

I have shown you the application of the spinal brace, and on a former occasion the felt jacket. As some of you may not have seen the plaster cuirass applied, I will now have one put on before you. This extension apparatus is used to suspend the patient and stretch the spine while the plaster is applied. It consists of a pulley with head- and arm-supports. This apparatus is also very useful as a means of gymnastic exercise for the spinal muscles, which in some cases should be used daily, keeping up the spinal extension for five or ten minutes morning and evening. It is important in using extension to be careful to see that the traction upon the neck and arms is equally divided. The rope is then gradually pulled, drawing up the patient as high as desired; but there should be no pain in the neck and shoulders. When the spine is in this extended position, the child usually experiences relief. While applying the permanent plaster dressing, it is only necessary to lift the patient until he can just touch the floor with his toes. The bandage is not applied directly to the skin, but a closely-fitting merino shirt is kept on under the jacket. There is also a towel folded up and placed in front, to allow some freedom of movement after the jacket is dry. It is called a stomach-pad, and is to be removed as soon as the plaster has set. Wherever any pressure exists, some loose cotton is laid on, to prevent excoriation of the prominent points.

The bandages are simply rubbed with dry plaster before rolling, and are dipped in warm water just before they are applied. Some plaster is also rubbed on with the hand between the layers of bandage. From four to five layers of bandage are sufficient.

With regard to the length of time the bandage may be kept on, it depends upon circumstances: in the summer, when the child is perspiring a good deal, it cannot be worn longer than a month; but in winter it will last longer without being spoiled. If the jacket is well made, it may be slit down the front and fitted with eyelets and lacing so as to be worn like an ordinary corset. This, however, can better be done with the felt jacket, which is lighter, cleaner, and lasts longer.

In cases of alcoholic coma, the introduction of a pint of hot coffee either into the stomach or the rectum is a safe and efficient expedient.

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ORIGINAL COMMUNICATIONS.

IS THE MECHANICAL IRRITATION OF THE OPTIC NERVE ALWAYS FOLLOWED BY A SENSATION OF LIGHT?

Read before the Philadelphia County Medical Society, January 17, 1883,

BY M. LANDESBERG, M.D.

JANUARY 26, 1878, a boy was brought to me whose right eye had been extirpated July 4, 1875, immediately after it had suffered injury from a gunshot. Eighteen months later, symptoms of irritation and of impairment of vision began to develop in the left eye, which, at the time of my examination, showed neurosis and amblyopia, with marked hyperæsthesia of the retina. This affection, of sympathetic origin, was due to the incarceration of the central end of the optic nerve in the connective tissue of the right orbital cavity. The latter was flat and shrunken; the orbital conjunctiva was highly congested, tightly stretched, and drawn, by means of cicatricial bands, towards the apex of the orbit, in the centre of which we found the macerated end of the optic nerve, embedded in a mass of yellowish pus. This end of the optic nerve was so exceedingly sensitive to pressure that even the slightest touch with the end of a probe caused the most agonizing paroxysm of pain. The whole body bent under the shock. The features of the face became distorted. Tears ran down the cheeks. The lids closed spasmodically. The left eyeball became injected. *But there was no sensation whatever of light in consequence of the irritation of the optic nerve.*

This fact, with the history of the case, I published in the June number, 1879, of *Zehender's Klinische Monatsblätter für Augenheilkunde*, a German monthly periodical of ophthalmology. I did not feel qualified to draw any conclusions from the single observation, the more so as I was not able at the time to answer affirmatively the preliminary question, whether I had to deal in this instance with a nerve which still possessed the physiological properties to convey the stimulus to the brain to be converted there into a sensation of light. But, my attention having now been directed to this subject, I made it a point to investigate in every proper case whether the physiological dogma is based on rational fact, which teaches us *that every mechanical irritation of the stump of the optic nerve will always give rise to a sensation of light.*

These investigations I have made during a period of four years, in twenty-eight patients, in all of whom the integrity of the optic nerve could be assumed with all certainty. For my present communication, however, I can only make use of the results which I have obtained in seventeen patients, rejecting the testimony of all those upon whose sound judgment I could not entirely rely. It is a most difficult problem we have to deal with, and I am deeply sensible of the disadvantages under which we labor in these investigations, in which we cannot bring to bear the evidence of our own senses, being wholly dependent upon the statements and assertions of persons who, for the most part, have not been educated under circumstances peculiarly fitting them for the task they are called upon to fulfil. However careful we may be in selecting the proper individuals, however cautious we may be in our proceedings, we cannot hope to stop all sources of error. There are two ways in which to make these experiments,—either to leave the patient in entire ignorance of the aim and scope of our investigations, or to make him acquainted with the phenomena which are likely to follow the irritation of the optic nerve. By the former method we will hardly attain any result whatever. The answers of the patient will run in every direction possible, except in the proper one, and even he who might have a sensation of light will forbear mentioning it, being unable to understand the phenomenon and to account for it. By the latter method we run the risk of prejudicing the mind of the patient, of working up his imagination, and of causing him to give us images of his illusions for actual sensations.

I have combined both methods, leaving the patient at first to his own judgment, and trying to get an objective statement of the sensations he had consequent upon my manipulations. If, on repeated experiments, he failed to make any allusion to a perception of light, I then explained to him the matter in question, and that I only wanted to know whether my irritating his optic nerve caused him to have a luminous impression. In every instance the truth of the assertion was repeatedly put to test. In patients whom I operated on without narcosis, I deferred the investiga-

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tions until they had fully recovered from the shock of the operation, and in those in whom I had to administer an anæsthetic, I waited with my experiments until they had regained the full use of their mental capacities, until they were able to answer judiciously my questions. In the seven instances in which I performed the enucleation of the globe without narcosis, I requested the patients to pay the strictest attention to the sensations they should experience at the very moment of having the optic nerve divided, of which act they were informed by a special signal agreed upon beforehand. Of the seven patients, six complained of a sensation of intense pain at the very moment the optic nerve was cut, and only one claimed to have had a luminous sensation. But this very patient was one of the eleven whose testimony I had to reject in consequence of the contradictory statements they made at every renewed experiment.

The material upon which the investigations are based is as follows:

Four cases of deep injury of the eyeball.

Four cases of foreign bodies in the interior of the eyeball.

In all these instances the enucleation was performed shortly after the accident.

One case of sarcoma of the iris. Vision $= \frac{1}{10}$.

One case of sarcoma of the choroid and one case of sarcoma of the orbit, with quantitative perception of light in all parts of the visual field.

One case of epithelioma of the cornea. Counted fingers at 6′.

Two cases of detachment of the retina, in which the patients suffered from the most distressing subjective sensation of light.

One case of malignant hemorrhagic glaucoma, in which the globe had to be removed on the eleventh day after iridectomy had been performed. Before the latter operation $V = \frac{1}{200}$.

One case of phthisis of the eyeball following an operation for cataract. The enucleation was done on the third week after the operation for cataract.

One case of total leucoma of the cornea, with secondary glaucoma. Loss of vision five weeks previous to the enucleation, in consequence of smallpox.

The special course of the investigations, and the results gained by the latter, are as follows:

1. Patients are left in total ignorance of the aim and scope of the experiments. The stump of the optic nerve is pressed either with a probe or with a pair of forceps, and the patient is asked to tell what sensations he has experienced in consequence of my procedure.

Sixteen patients stated that they had only felt great pain, and nothing else. A sensation of light was asserted by one patient.

These statements were corroborated by repeated investigations.

2. Patients are made acquainted with the problem which they are called upon to solve.

The consequence of this explanation was that now I invariably obtained from three patients *the positive statement of their having experienced a sensation of light every time I produced a mechanical irritation of the stump of the optic nerve.* The luminous perception was the more intense and distinct, the greater the stimulus which acted upon the optic nerve.

But in all the other thirteen cases the result of the experiments remained negative.

What was the meaning of these negative statements? Obviously they could only be explained by one of two causes. Either the mechanical irritation of the optic nerve did not produce any sensation of light, and the testimony was in exact accordance with the facts, or the mechanical irritation of the optic nerve gave rise to a sensation of light, but the patients were either unable to direct their mind to its perception, or were too slow to interpret immediately the sensation. If it were possible, I reasoned, to demonstrate before the very eyes of the patients the phenomenon in question,—if we could show them, for the purpose of illustration, a tangible object by which to help their perceptive faculties,—the results of the experiments might turn out quite differently.

In order to bring the question to a final issue and to make the experiments conclusive, I took the patients into a darkened room, and pressed with the top of my finger upon their healthy eyeball, producing in this way phosphenes which were readily perceived in all instances. This fact having been established, I explained to the patients that I only wanted to know whether pressure upon a certain spot in their orbits would excite similar luminous sensations.

When after this preliminary demonstration the experiments were repeated, I ob-

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tained from four patients *the positive statements of their having perceived a flash of light on the side corresponding to the removed eyeball, the very instant I pressed upon their optic nerve.* Two of the patients maintained that they had experienced the same kind of luminous impression in the precedent experiments, and that the only reason of their having failed to mention this sensation was their belief that they had perceived these flashes of light with the healthy eye. Their utter amazement at the notion that they were able to "see light" after the eyeball had been removed was to me the best evidence of the truth of their assertion.

But still the results of my investigations remained negative in nine instances. Mechanical irritation of the stump of the optic nerve caused the patients to complain only of pain, but without perceiving any sensation of light.

Of the eight patients in whom the result was positive, there were four who, operated on without narcosis, had emphatically denied any sensation of light during the division of the optic nerve.

IS THE CHORDA TYMPANI A SEPARATE AND DISTINCT CRANIAL NERVE?

Read before the Philadelphia County Medical Society, January 17, 1883,

BY CHARLES H. BURNETT, M.D.

I SHALL answer this question affirmatively by reporting to you some recent investigations of Dr. Sapolini, of Milan, concerning the origin and distribution of this badly-named and much-discussed nerve.

In all anatomical books the chorda tympani is described as a branch of the seventh or facial nerve, and in most physiological works this nerve is considered as presiding in some way over the sense of taste and the functions of the submaxillary gland.

Furthermore, let me recall to your minds that all anatomical works describe a so-called intermediary nerve of Wrisberg, a nerve-filament lying between the seventh and eighth nerves at their apparent origin, and first described by Eustachius Scarpa, some years after Wrisberg, stated that the intermediary nerve of Wrisberg received its origin in part from the groove between the seventh and eighth nerves, and also from filaments of the ninth, the glossopharyngeus. Sapolini, however, whose work we are now specially considering, is convinced from repeated anatomical investigations that the nerve discovered by Eustachius and Wrisberg, and which bears the name of the latter, is the proximal part of the chorda tympani, which really takes its origin in the floor of the fourth ventricle, and terminates in the muscles of the tongue.

In his brochure entitled "A Thirteenth Cranial Nerve," published in Milan, 1881, Sapolini gives the detail of his dissections, beginning at the calamus scriptorius, and advancing to the ganglion geniculatum in the genu of the facial canal. He claims to show that there exists a nerve lying close to, but entirely separate from, the facial nerve up to this point, the ganglion geniculatum. He then proceeded to dissect the chorda tympani nerve, from the tympanum backwards to the aforesaid ganglion geniculatum in the facial canal, and found that the chorda tympani was one and the same nerve as the intermediary nerve of Wrisberg, which he had already traced from the brain to the geniculate ganglion.

To dissect the chorda tympani farther onward from the tympanic cavity through the canal of Hugier, in the Glasserian region, to its junction with the lingual branch of the fifth nerve, is comparatively easy. From this latter point, viz., the anastomosis of the chorda and the lingual nerve, with most patient labor, he has found that the chorda tympani forms a dense plexus with the lingual nerve, distributed to the muscles of the tongue, and for this plexus he proposes the name of "plexus tympano-lingualis."

The entire length of the thirteenth cranial nerve, for which the name chorda tympani may as well be maintained, is 267 millimetres, divided into tracts as follows:

	mm.
From the calamus to the fourth ventricle	33
From the fourth ventricle to the pons varolii	15
From the pons varolii to the ganglion geniculatum	30
In the ganglion geniculatum	6
From this ganglion to the so-called loop, where it has always been said to leave the facial nerve	17
From this loop to the bony pyramid, where it enters the tympanic wall	14
Through the bony wall of pyramid	2

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Through the tympanic cavity . . .	9
From the exit from the tympanic cavity to its union with the lingual nerve .	37
From this union to the formation of the plexus tympano-lingualis . . .	34
From the beginning of this plexus to the apex of the tongue	70

A few weak fibres pass from this nerve to the submaxillary gland and ganglion,—entirely too small a number, however, to make it probable that the only function of this nerve should be the innervation of this ganglion and gland. This nerve, the thirteenth nerve, as its describer calls it, is distributed to the muscles of the tongue, where the plexus formed by it is joined by a few fibres from the glosso-pharyngeal.

Sapolini thinks that, from its origin in the corpora restiformia and the lateral cords, the nerve must possess both sensitive and motor fibres.

It is a surprising fact that the filaments from the thirteenth nerve are distributed to the muscles of the tongue, far surpassing in number those of the lingual nerve, which supplies chiefly the superficial tissues of the tongue.

Surprised at the large number of fibres from the thirteenth nerve in the muscles of the tongue, Sapolini has come to the conclusion that their mission must be a special one. He believes that the lingualis of the fifth and its anastomoses with the glosso-pharyngeal give to the tongue sensibility both as to touch and taste; the extensive movements of the tongue, as in deglutition, may depend upon the hypoglossus and the lingualis of the seventh.

But this so-called thirteenth nerve, the chorda tympani, Sapolini thinks should be called a nerve of speech. The theory runs as follows. The voice must be formed into letters, and further into words. A vowel cannot be formed without a special movement of the tongue, and in no way can consonants be accented without special and simultaneous contraction of one or more intrinsic muscles of the tongue. It is believed that the chorda tympani, or the thirteenth nerve, presides over this function of the tongue.

When a child begins to articulate, the monosyllable or the word which it attempts to pronounce begins with the vowel *a* or *o*, which requires the least motion of the tongue. The slow progress in articulation the author believes to correspond with the late manifestation of the white nerve-fibres, which subsequently appear on the floor of the fourth ventricle.

Speech belongs exclusively to man, but with perseverance a parrot can be taught to talk. If, after parrots are so taught, their chordæ tympanorum be cut, as Sapolini has done in two instances, the parrots cease to talk.

Two pathological cases in man are mentioned: one in which a blow on the temple was followed by diminished hearing and impeded speech. Here the concussion is supposed to have been conveyed to the chorda in or at its exit from the tympanic cavity.

In the second, necrosis in the region of the Glasserian fissure and canaliculus chordæ is very justly supposed to have involved the chorda tympani nerve, and to have thus caused very great impediment in speech.*

In conclusion, let me lay before you a clinical observation, which must have been made by all present,—viz., that if a talking child under six years of age loses its hearing in both ears, it often simultaneously shows either great impediment or loss of speech. In such cases the child cannot have forgotten all at once how to talk, nor can it be reasonably maintained that so young a child is deterred from speaking simply because he cannot hear himself and is ashamed or afraid of making mistakes.

May it not be that in some instances the disease in the ear which has produced the deafness has also injured the chordæ tympanorum in their passage through the tympana, and thus abrogated their influence over the muscles of the tongue, and led to an impaired ability to talk?

RIGHT HEMIPLEGIA, WITH SPEECH AND MENTAL DISTURBANCE—RECOVERY.

BY DR. GLASGOW.

THIS case was the person of a female, aged 36 years, married, and the mother of one child, five years old. The woman had for a long time been in indifferent health, headache being a frequent occurrence and constipation habitual. One year and a half ago she had an

* Those who may desire an almost complete translation of Dr. Sapolini's brochure are referred to the very elaborate review of it by Dr. Vermyne, of New Bedford, Massachusetts, in the American Journal of Otology, 1881, vol. iii. p. 312.

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endometritis, and since that time a mild attack of typhoid fever. On the 2d of December, 1882, while she was standing ironing clothes, she suddenly felt her right side become numb and weak, and when she attempted to speak of the trouble to her husband, who was near, she found that she was unable to talk plainly. In a short time she vomited and had to be put to bed, being very nervous and crying much. Thirty-six hours after this, viz., early in the morning of December 4, the woman had an attack of spasm. This was seen by her husband and one or two others, and from the account given by them it would appear as though tonic spasm predominated.

This condition was followed by a period of apparent coma, lasting four hours, during which time the woman lay with her eyes open, but seemed not to see or hear anything. When she returned to her senses, it was found that her right arm and right leg were completely paralyzed, and that she could utter monosyllables only. In two or three days her speech became somewhat better, and she recovered to a certain extent the power of her leg. She got out of bed and down one flight of stairs unaided, when she became very weak and had to be put again to bed, and the paralysis and speech-trouble returned, and remained so to the time I first saw the woman, December 28, about four weeks after her first seizure.

On examining the patient carefully, I observed that all the movements of the face and eyes were retained and the pupils were equal; her tongue was protruded with apparent difficulty, but did not deviate markedly; a white fur covered the tongue, and the mouth was pasty.

The right arm and leg were completely helpless: the muscles responded well, however, to a rapidly-interrupted current of moderate strength. There was no apparent sensory disturbance except in the right leg. Handling the leg or applying the current to it caused the woman to complain of pain. Later it was observed that sinapisms to the leg provoked like expressions of pain. The patella reflex differed not in the affected leg from the sound one. They were, however, either exaggerated or very marked for the normal condition.

The speech-disturbance was as follows. The woman could say "I," "yes," and "no," frequently using "yes" in the place of "no," and *vice versa*. Early in her sickness she was reported to have said, "I want to talk, but forget what I want to say." The speech-trouble varied much from day to day, the patient at one time being able to use the words mentioned only, at another time being able to speak moderately well, although the trouble had not at any time disappeared entirely.

The mental condition also seemed peculiar. When I first saw the woman, she lay with her eyes half closed, sometimes answering the questions addressed to her, at other times paying no attention whatever, seemingly unable to read writing, appearing very much indeed like a person semi-narcotized. The case was certainly puzzling, a state of affairs not lessened at all by the statements of the attendants that "paralysis ran in the family." Of this I could, however, obtain no definite history. Laxatives were now administered, and light, nutritious food ordered. In two or three days the aphasia became very much less, and the semi-narcotized condition began to disappear. In about a week the patient talked well and could raise her hand to the top of the head. In another week all the symptoms were gone, and the woman was well apparently, except general weakness. The question which naturally suggests itself here is, What was the lesion? From the prompt and perfect recovery made by the case, it is, I think, perfectly plain that no part of the nervous machinery was broken. An embolus, temporarily disturbing the cerebral circulation, might account for some of the symptoms, but scarcely for all of them, and, moreover, the woman's heart was sound and there was no history of rheumatism. To say that the woman had an hysterical hemiplegia would be a very convenient and doubtless correct explanation of the trouble.

This condition is very clearly set forth by Todd in his "Lectures on Nervous Diseases," and by Weir Mitchell in his book on the "Nervous Diseases of Women." In a series of lectures, which can be seen in the London *Lancet* for 1874, Paget goes over the whole range of the nervous mimicry of organic disease. To these authors any of our readers who are interested may profitably refer. My own disposition is to believe that the woman suffered from cerebral exhaustion, for certain it is as anything can be that her recovery was aided by the use of tonics, lax-

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atives, rest, good food, and fair promises. The treatment of paralytic women calls for the exercise of more than ordinary vigilance, and it would probably be well to keep back, temporarily, one's opinion in such cases; and, even after the case becomes plain, little good will be done by exposing its true nature.

THE DIFFICULTY OF DIAGNOSIS IN ABDOMINAL TUMORS.

BY W. THORNTON PARKER,
Acting Assistant-Surgeon U.S.A.

THE following quotation occurring in a recent work on gynæcology, "the diagnosis of abdominal tumors being generally one of much difficulty to the *student*," receives from Dr. Van de Walker, the reviewer of the work, this excellent criticism: "Now, we would like to know when *that* period of life ceases, and the illuminated moment comes, when the abdominal diagnosis is easy."* That difficulties attend the diagnosis of all abdominal tumors needs no proof; but the following case may be instructive, and a good illustration of the subject under consideration. I will mention it briefly.

Henry V., English, aged 33 years; tall, lean figure; formerly a member of H.M. Life-Guards: of excellent character, married. Came to this country and enlisted in the U. S. Army; served mostly on extra duty as a painter. After expiration of service, engaged regularly in the business of house-painter; was last employed painting the cabin-rooms of a Hudson River steamboat, when he was taken sick and applied to a regular physician for treatment. His symptoms and history suggested lead-poisoning, but, not receiving the desired benefit from the treatment used, he placed himself under the care of a homœopathic practitioner, who treated him for obstinate constipation with small and repeated doses of castor oil. Not improving under this treatment, he again sought advice from regular physicians.

He received no benefit from any treatment employed, and became rapidly worse.

A few weeks before his death, and about eight months after he was taken ill, he came under my care. I found him much emaciated, feeble and anxious, complaining of severe pain and pressure in the abdominal region. He stated that his bowels had remained in a constipated state for nearly three months. Upon examination, a large tumor was found to exist, occupying a considerable space in the epigastric, umbilical, and left hypochondriac regions. The neglected constipation suggested a fecal tumor. By the use of repeated injections with a long rectal tube, large quantities of fecal matter came away. Tonics, extract of malt, and the most nourishing food rapidly improved the condition of the patient, both physically and mentally. This very promising state of affairs continued for two or three weeks, until at last no more fecal matter could be brought away. About this time the abdominal pain increased; mental depression, loss of appetite, sleeplessness, and general exhaustion followed; the cheerful, hopeful condition of the patient was gone; agonizing pain increased hourly; he rapidly sank, and died in great suffering. Autopsy, sixteen hours after death, revealed great emaciation, and upon opening the abdominal cavity a very large encephaloïd cancerous tumor was found, weighing about thirteen pounds. It was firmly fixed, having formed numerous adhesions involving the duodenum and pancreas to a very great extent. The tumor was very spongy in character, and filled with a whitish and yellowish fluid. This growth seemed to have had its origin in lymphatic glands situated in the vicinity of the first and second lumbar vertebræ. Its rapid growth and the short time the patient suffered lend interest to the history of this case.

"No tumors present a greater variety of appearance upon section than those of soft cancer. Differences of structure occasion many of these varieties, and others arise from the fact that, being abundantly supplied with blood, the tumors are exposed to all the changes and accidents which great vascularity involves."†

The obscurity which veils the origin of so many of these cancerous growths seems to baffle the skill of those most familiar with them.

In the case just mentioned, the patient had been a cavalry soldier, in the habit of wearing a heavy sabre, and, naturally of thin figure, the pressure of tightly-buckled belt, and the sudden jerks of the sabre on the belt in the violent military exercises, *may* have been the origin of this fatal tumor.

In such cases it is also interesting to consider how much severe mental suffering may contribute to the formation of such growths.

It is without doubt true that the system weakened by nervous exhaustion is in a state ripe for the development of *all* diseases; but how much acute mental suffering actually stimulates morbid growth and processes remains to be investigated.

* Amer. Jour. Med. Sci., July, 1882.

† Holmes's System of Surgery, vol. i. p. 568.

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NOTES OF HOSPITAL PRACTICE.

BELLEVUE MEDICAL COLLEGE, NEW YORK.

CLINIC OF PROF. LEWIS A. SAYRE, OCTOBER 14, 1882.

GENTLEMEN,—I bring before you to-day this young man, who came to my office an hour ago with supposed disease of the knee-joint of nine years' standing. He had about made up his mind that it was incurable, and the medical gentleman who had been treating him advised amputation; he, however, would not consent until he had seen me and obtained my opinion. I brought him here to you as there is nothing the matter with the knee at all. He has been under homœopathic treatment for nine years, being treated for what he was told was scrofulous disease of the knee-joint. You will observe his right leg is perfect, but when you look at his left knee you would think there was great deformity, because it looks so much larger than the other. He had, when he came to me, a red flannel bandage bound around the left leg and lower part of the thigh, almost tight enough to cut off the circulation of the limb below, which has caused atrophy of the muscles. (The house-surgeon now took the measurement of both knees and thighs and below the knee.) You here observe that upon taking the measurements of the knees we find them to be precisely alike. There is no atrophy at the knee, but the muscles above and below the knee are atrophied by means of this tight bandage he has worn. The knee retains its normal size because he could not stop the circulation of the bones. Our measurements here show the left thigh to be two inches smaller in circumference than the right, and the left leg is one and a half inches smaller than the right, but the knees are precisely the same. When I press this knee with all my power, I produce no pain whatever; he cannot extend this left leg quite as fully as he ought, because the biceps, semi-membranosus, and semi-tendinosus muscles have become contracted; at the same time the quadriceps is enfeebled for want of use. The knee-joint has become dry for want of use. Nature does not secrete synovial fluid unless it is to be used; if it were not so, we would all have dropsy of the joints if we were confined to our bed for any length of time.

So here in this case there is no disease of the joint; it is a dry joint; it wants simply friction and massage, and to be used every day. You see he can bring his leg almost straight by a great effort. As he does so, I place my finger upon his leg and press gently down, and thus cause him to make greater effort and bring the muscles into action. This is all the treatment required; there is no disease here whatever.

This young man has been taking fifteen doses of homœopathic medicine a day for nine years, and comes to me from the interior of Pennsylvania, having been advised to have the leg amputated to save his life; and you see how simple the treatment required in his case, and how slight the difficulty under which he is really suffering.

I present you here with the case of a little boy. He was brought to me a year ago; I was sick in bed at the time, and made an imperfect examination, and therefore an erroneous prognosis. He has returned to me again to-day, and I have asked the father to bring him here to-day that you may see the mistake that I have made, in order that you may not fall into the same error. Wherever I have made an error, I will endeavor to bring the case before you, as by this means you will learn more than from any theoretical teachings I might advance in relation to the case.

Those who have heard me lecture before will remember my general rule as regards tenotomy,—namely, that all muscles, tendons, or fascia that can be brought to their normal position by gradual traction should never be cut, but if you find that you cannot bring them to their normal position you must cut them; and yet in this case before you I neglected to follow my own instructions. Now, if any tendon, muscle, or fascia, being stretched to its utmost, still retains the part in an abnormal position, if upon point-pressure being made upon this tendon, muscle, or fascia when it is stretched it produces a reflex spasm, that tendon has become contractured and can never be stretched further, and must be divided before any satisfactory result can be secured; whereas if you put it upon the stretch, and upon point-pressure being made it gives no reflex spasm, by gradual traction it can be brought to its normal position, and does not require section. If it has arrived at the point of structural

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shortening which I call contractured, you have a case for tenotomy.

This difficulty was noticed in this child when he was ten months old, after he had recovered from an attack of inflammation of the brain; he then had paralysis of the left leg. He has, however, gradually recovered, but it has left him with want of power in the peroneal muscles, and the weight of his body has now brought the foot into the condition of talipes varus. There is also, as you observe, a slight elevation of the heel: we therefore have the condition of talipes varo-equinus. We have five varieties of talipes,—namely, varus, valgus, equinus, calcaneus, and plantaris; these are generally combined more or less, and the predominating deformity is the leading term of its nosology.

You will observe that on the outer part of the foot it is very tender and sore, owing to the weight of the body bearing on this point, it being, of course, in an abnormal position. Now, about a year ago, when I saw this child, I advised the father to use friction and electricity upon the peroneal muscles. Had I made a more careful examination, I should probably have pursued a different course of treatment. You observe that I can bring the posterior part of the foot to its normal position. The front part of the foot, however, I cannot restore to its natural position; and now, as I bring the plantar fascia upon the stretch and make point-pressure upon it with my thumb, you observe the instantaneous reflex spasm which follows.

Now, the principle involved here is just the same as if a ship were fastened to the shore by a hawser which is stronger than the engines of the ship: the engines cannot break the hawser or move the ship. It is just so here: the plantar fascia is stronger than the electricity I have been trying to overcome it with. Don't you ever make such a blunder.

Now, the treatment is simply this. I take this small tenotome, and, my assistant having brought the fascia upon the stretch, I pass the tenotome beneath the contractured tissues. I turn the edge towards the same, and, with a short sawing motion of the blade, I sever the tissues: this is generally accompanied by a sudden snap, when the blade is instantly returned to its flattened position and withdrawn. The thumb is then placed over the wound, to prevent the admission of air. You will notice that I use the curved blunt-pointed tenotome in this operation.

(The operation was then performed before the class, no anæsthetic being administered to the child, he hardly making a sound,—showing that the operation, when skilfully performed, is by no means a painful one.)

The fascia being now severed, you observe I can restore the anterior portion of the foot to its normal position, and, the foot being flexed at right angles, it is fastened by a strip of adhesive plaster passing around the board at the heel and carried over the instep. A roller bandage is now bound around the foot, leaving the toes exposed, in order to observe if circulation has been checked. A broad band of adhesive plaster is now carried from the anterior portion of the foot-board up to the tibia, and there secured by the roller bandage passing up the leg, the end of the plaster being reversed upon the bandage, and this in turn covered. The foot is now firmly and securely held in the normal position by this means.

The toes, you will observe, I leave exposed in order to ascertain if circulation has been impeded: if it has not, you can let the bandage remain for ten or twelve days.

(At the following clinic the child was returned, and the dressing removed for the first time. The wound was found to be entirely healed, and the foot restored to its normal position. The following treatment was then ordered: the application of a club-foot shoe, and also Hudson's elastic muscles, for the purpose of flexing the foot.)

I have here also, gentlemen, a little girl, the daughter of a physician who resides in Texas, and who has sent her to me. Recognizing the benefit which it may be to you, he has kindly allowed me to bring her before you. She cannot stand alone. You observe that there is complete paralysis of the muscles. The right leg is completely paralyzed. She can, however, flex the toes; and that is about all the power she has. She cannot bring the foot up. On examination, I find a deformity at the knee-joint and also at the thigh. I think the instrument she has been wearing has caused the difficulty at the thigh; as you will observe that it only runs half-way up, and at this point the femur has become bent: the instrument has borne the weight of the body at this point and pressed upon the thigh; and you now observe that by

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gentle and forcible pressure I can even spring the femur straight. There is also sub-luxation at the knee; the tibia is subluxated outside of the external condyle. I have now succeeded, as you observe, in forcing it back into place. The leg below, you notice, is undeveloped, and has a bluish appearance. There is pure varus of the foot, and yet I can very readily bring the heel to its proper position; and now I make firm pressure upon the tendo Achillis after putting it upon the stretch, and I produce no reflex spasm, showing the tendo Achillis does not need section. The anterior part of the foot from the metatarsal junction is bent downward, as you observe. I will now try to restore it to its normal position; but I find that I cannot do so, and upon bringing the plantar fascia upon the stretch and making point-pressure upon it, you observe instantly a reflex spasm which takes place. It is, therefore, absolutely impossible to make any progress in the treatment of the deformity of the foot until the plantar fascia is cut and the contracture removed. This being a private patient, I cannot perform the operation before you. I will, however, endeavor to bring the case before you again at a future clinic. (The following operation was afterwards performed at the residence of the patient, an anæsthetic being administered. The heel being brought into the normal position, the plantar fascia was put upon the stretch to its utmost capacity; a small curved blunt-pointed tenotome was then passed beneath the plantar fascia, the edge of the blade was then turned towards the contractured tissues, and with a short sawing motion they were completely severed; instantly the blade was returned to a flattened position and withdrawn, the thumb being placed over the wound in order to exclude the air. The foot was then brought to the normal position and dressed in the same manner as in Case No. 2.

Upon the following day no constitutional disturbance of the patient could be detected.)

TRANSLATIONS.

RESULTS OF THE OPERATION FOR THE TOTAL EXTIRPATION OF THE UTERUS.—Olshausen (*Archiv für Gynäkologie*, Bd. xx. Hft. 2) reports the results of his experience from the vaginal method of extirpating the uterus, and to the paper are appended expressions of the views of other operators. Twenty-three cases in all had been treated in this way by the author: three of these, however, were not completed. In one case on account of rectal, and in two on account of vesical growths, there occurred either recto-vaginal or vesico-vaginal fistulæ. Of the remaining twenty, fourteen survived the operation, six died. In nineteen there was carcinoma of the cervix, in three either cancer or sarcoma of the body of the uterus, in one there was only a small myoma of the posterior wall of the cervix. Of those who recovered from the operation, three were known to have had a return of the disease, and two of them perished. He has abandoned the reversal of the uterus, and in the last eight or ten cases has used the elastic ligature exclusively. Irrigation with carbolized solution during operation is frequently repeated. Afterwards a drain is established in Douglas's cul-de-sac, which is protected by iodoform gauze.

Martin, of Berlin, reported thirty-one cases of vaginal extirpation of the uterus. In five the operation was not successful in removing all the diseased structure. Of the remaining twenty-six, four died. He begins the operation by the opening of the posterior vaginal wall, and transfixes and ligatures the divided tissues, so that the subsequent operation is nearly bloodless. He still adopts the tilting over of the uterus, and also always uses drainage. As regards return of the disease, his operations have not been very successful; only a single patient remained free from disease eighteen months after the extirpation.

Kugelmann, of Hanover, had not as yet seen a successful case of carcinoma: he therefore considered the operation of total extirpation as applicable more to cases of adenoma with severe hemorrhages than to cancer. Without operation the latter class of patients suffer less than with it.

Sänger, of Leipsic, operated twice. Both survived the operation: in neither was there drainage. The operation was performed according to the method of Czerny-Schröder. In the first case, a return of the disease occurred, with the formation of a high intestino-vaginal fistula; the patient died ten and a half months after operation.

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Olshausen had, in cases of tumor-like carcinoma of the intra-vaginal portion of the uterus, amputated the diseased part with sometimes permanent cure. He would restrict the operation of extirpation to cases of malignant new growth, but would not consider it applicable to a uterus merely because there is hemorrhage; in the latter class of cases castration is indicated.

Veit, of Berlin, considered in many cases of cancer of the cervix that supravaginal amputation would suffice, and had himself had several cases of permanent cure to report.

Renecker and Martin opposed the statement of Kugelmann, that a pronounced cancer of the uterus is beyond operation, and, in reply to Olshausen, Martin said that castration would not in all cases relieve that severe bleeding from the uterus, as one of his cases had demonstrated,—"*Verhandlung den Gynäkol. Sektion der Naturforscherversammlung in Eisenach,*" *Centralblatt für Chirurgie*, No. 3.

Reflex Cough, Splenic or Hepatic, with Cachexia, simulating Pulmonary Phthisis.—In the January issue of the *Revue de Médecine*, Dr. Trastour points out the fact that, like the stomach cough so well known to writers on chlorosis, hysteria, and dyspepsia, there are also splenic and hepatic coughs, due to congestion or other disorders of these viscera, and entirely unconnected with pulmonary disease. This engorgement of the spleen and liver may have a paludal origin, or may simply be due to dyspepsia. In either case the removal of the cause will relieve the cough. Some of these cases, from long-continued disorder, exhibit considerable impairment of health, which may well be mistaken at first sight for the cachexia of pulmonary consumption. An examination of the lungs with a negative result, and the discovery of a swollen tender spleen or liver, will indicate both the nature of the case and the proper treatment. If the character of the cough be considered, it will be found to be peculiar; it is nervous, spasmodic, and it is recognized as soon as it strikes the ear of the experienced practitioner. Ordinarily there is no attending expectoration, save occasionally a little clear mucus; the cough is more or less abrupt, more or less frequent, short, not paroxysmal; it often appears—and this is important—at the time of swallowing food, but especially upon palpation or percussion over the spleen or liver. If there are attacks of fever, the cough is sometimes very troublesome at the period of the chill.

A number of illustrative cases are reported in this paper. The author concludes that the cough itself is of minor importance, but when accompanied by anæmia, emaciation, and signs of impaired health, it may lead to the erroneous diagnosis of consumption and correspondingly incorrect prognosis and treatment. The necessity of examining other viscera, when the thoracic organs give only negative signs, is very evident. In the treatment, counter-irritation by blisters over the liver or spleen is very important, and antiperiodics are often needed.

The pneumogastric nerve is believed not to be the principal agency in exciting this form of cough. The recent experiments of Morel and Arloing (*Thèse*, Lyons, 1879) have demonstrated that contraction of the pulmonary vessels follows painful irritation of the stomach, the liver, and the intestine; and, moreover, that it is by way of the sympathetic that these reflexes reach the lung in order to influence these vessels, and not by the vagus.

Hysterical Contracture in a Man.—In a recent lecture Charcot makes the following observations with regard to hysteria in the male sex. Hysteria incontestably can develop in a man, and does so more frequently than would be supposed at first glance. This subject of male hysteria is one of those to which attention has been especially directed of late years, and not less than five theses upon this special subject have been presented to the Faculty at Paris from 1875 to 1880. Briquet had already stated that for every twenty cases of hysteria in women there is, in Paris at least, one of the other sex affected in the same manner. This figure appears to Charcot a little high; but still Klein, the author of one of the theses mentioned, had collected seventy-seven cases of hysteria in the male, to which Charcot added three coming under his own observation, which makes the respectable number of eighty, from whence he concludes that in man hysteria is not truly a very rare affection. One fact brought to light by this work was that, when it is developed in man, hysteria is oftenest hereditary,—this was present in

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twenty-three cases out of thirty,—and, further, that hysteria in the mother often caused hysteria in the son.

Another idea resulting from these observations is that the hysterical accidents in man most frequently appear after the age of fourteen years, to the age of twenty or thirty, sometimes later. Without doubt they may also occur in childhood before puberty, from five to fourteen years, but they are more common in the adult. Another point is that men presenting this hysterical neurosis are not necessarily effeminate in appearance; they are, at least in a goodly number of cases, robust men, presenting all the attributes of the male sex,—soldiers, mechanics, married and fathers of families,—men, in a word, among whom one, if not warned, would be surprised at meeting an affection considered by many as exclusively belonging to women. Finally, it may be said that while in man, as in woman, the neurosis may present itself of a blurred type, it is, on the other hand, perfectly established that it may appear in him endowed with all the attributes which belong to the clinical picture of hystero-epilepsy, hysteria major, and grand hysteria. As regards special points, they may be summed up as follows:

1. Hemi-anæsthesia, sensorial and sensitive. This "spot" which characterizes almost certainly the hysterical state, when certain affections which sometimes produce it (cerebral lesion, lead-poisoning, alcoholism) have been carefully excluded,—this hysterical hemi-anæsthesia, in a word, may be encountered in man as in woman.

2. Ovarian irritation, a frequent symptom of hysteria in woman, is wanting in man; but in him, in some cases at least, it may develop from the irritation of a testicle retained in the canal, and pressure of the testicle arrests or provokes an attack.

3. In default of the ovary, we find in man hysterogenic points with the same characters as in woman, but in him the points of election are the bregmatic region, one or the other of the sides of the chest or abdomen, and especially the left flank.

4. Finally, the series of phases of the grand attack of hystero-epilepsy is found equally in man; of which a number of cases have been placed on record.

5. Paraplegic or hemiplegic paralysis, with exaltation or, on the contrary, with disappearance of the tendon reflex, is a phenomenon sometimes observed; still, it is much more frequent than contracture, which appears to have been rarely encountered.

HYPNOTISM AS A THERAPEUTIC AGENT.—Prof. Achille de Giovanni, having made use of hypnotism in a number of cases, reports (*Clinica Medica della Universita de Padova*, 1882) sufficiently satisfactory results to warrant the extension of this method in practical therapeutics. The following is a *résumé* of the cases published:

1. Rachialgia in a broken-down nervous subject, which had been previously successfully treated by massage for contractures of the lower extremities. The artificial hypnotic condition was readily produced. It was repeated every day for a week, during which period the pain ameliorated and finally disappeared. At the same time the *morale* of the patient greatly improved.

2. A woman, 18 years of age, complained of great pain in one leg and pain in the back; afterwards vomiting occurred, and persisted once or twice daily, without being more than temporarily improved by treatment. Hypnotism was tried, all other treatment discontinued. At first she could only be put to sleep with difficulty, but on persisting she was more easily influenced; the vomiting stopped. The cure persisted for at least a month after cessation of the treatment.

3. A nervous woman complained of arthralgia and contracture in the right leg, which improved by application of electricity to the homologous muscular groups of the opposite limb (according to the law of functional antagonism of symmetrical centres of the nervous axis). After an attack of fever without known cause, there was a condition of incomplete right hemiplegia, glossalgia, labio-glosso-pharyngeal paralysis, also an attack of hystero-epilepsy, neuralgia of the shoulder, with an eruption of ecthyma, furuncles, and ganglionic engorgement. Hypnotism could not be induced until the third attempt. From that moment the patient rapidly improved. In a fortnight afterwards, there having been given two or three daily séances during this period, she was completely cured.

4. In a case of alopecia, where it was desired to dissect off a piece of skin for microscopic examination, the operation was done without the knowledge of the patient or causing any pain during the hypnotic condition.

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5. A young man suffering with pain in the knee accompanying coxalgia felt relieved; after the hypnotic sleep the pain had greatly diminished.—*Revue de Médecine.*

EXPERIMENTAL RESEARCHES ON THE INTESTINAL MOVEMENTS, ESPECIALLY FROM THE PATHOLOGICAL STAND-POINT.—From a series of observations upon animals, undertaken with a view to ascertaining the influence of certain agents upon the intestinal movements, Nothnagel (*Zeitschr. f. Klin. Med.*) formulates the law that "when the intestine contains its normal contents, or indifferent substances, it only reacts by peristaltic movements going from the pylorus to the anus. When, on the contrary, its contents are irritating, there exists at the same time an ascending and a descending peristalsis." With regard to the production of stercoraceous vomiting in acute obstruction, he concludes that vomiting of fecal material should be attributed to abdominal pressure acting upon accumulated matters, which flow, as a result, in the only direction which is open to them,—that is to say, towards the pylorus. In the mechanism of the production of invagination he states that it was seen to be as follows: a segment contracted circularly becomes introduced into the relaxed portion immediately below. As a rule, it disappears spontaneously after a greater or less length of time.

INTESTINAL ATROPHY.—Although attention has been directed of late to atrophy of the stomach and its glands, intestinal atrophy has had little study given to it. Nothnagel points out the principal anatomical features, as disappearance of the glands and the villi, transformation of the mucous membrane into a thin web of ordinary connective tissue, without any particular change in the muscular wall. The frequency of this condition, according to this author, is indeed surprising: he states that of the cadavers of adults examined by him fully eighty per cent. presented this alteration to a variable extent and in different degrees. It usually occurs in plaques in the middle of normal mucous membrane or surrounded by a certain amount of catarrh. The cause is unsettled, and perhaps is not uniform; atrophy may occur as the result of a chronic catarrh of the intestinal mucous membrane, or it may follow acute inflammation, especially in infants.

There are no pathognomonic symptoms. Nothnagel has observed that the alvine discharges occurring once a day are soft, instead of being of normal consistence; they do not contain mucus. Further microscopic examinations may possibly explain the etiology of atrophy; which is not to be confounded with simple looseness due to acceleration of the peristaltic movements, which usually produces several stools daily. When the lesions are limited in area and confined to certain regions, such as the cæcum, no appreciable signs are given during life; when it affects a larger portion of the bowel, the symptoms of intestinal indigestion appear in proportion to the degree and extent of the disease.—*Revue Médicale.*

ANIMAL VACCINE AND ITS CONTAGIUM VIVUM.—Dr. Wolff concludes an interesting paper on the vaccination question with the expressed wish that the use of animal vaccine lymph should be made obligatory by law. Wherever vaccination is compulsory, the government is under obligation to see that the dangers of the transmission of syphilis, consumption, scrofula, etc., are guarded against; and this can be accomplished only by the use of animal virus.

He has succeeded, in culture-experiments carried through fifteen generations, in isolating the micrococcus vaccinæ, which shows great developing energy. His experiments with this, and the details of demonstration, appear in another place.—*Berlin. Klin. Wochenschrift*, January 22.

PAINFUL FIBROMA BEHIND THE KNEE-JOINT, REQUIRING THE OPENING OF THE ARTICULATION; WITH A SUCCESSFUL RESULT.—At the last meeting of the Société de Chirurgie, M. Nicaise reported a case of a woman who had suffered for twenty years with a painful growth behind the inner condyle of the femur. The structure, which was found to be a mass of fibromata, was removed, Listerian precautions being observed and an Esmarch bandage used. Although the articulation had to be quite freely opened, the wound healed rapidly without any unfavorable sign. On the seventeenth day the patient was able to walk upon the limb. Special attention was called to the value of the Listerian method, which permits the opening of the knee-joint without serious results.—*Le Progrès Médical.*

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PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, FEBRUARY 24, 1883.

EDITORIAL.

THE NEW YORK STATE MEDICAL SOCIETY.

THE seventy-seventh annual meeting of the Medical Society of the State of New York was held at Albany from February 6 to 8, inclusive. The principal subject of interest was the amendment to the By-laws proposed by Dr. Squibb, which had been brought prominently before the profession of the State, and diligently discussed, since the adoption of the new Code of Ethics last year. The grounds taken by the opponents of the new code were that the change from the former code was more in the nature of a revolution than of a revision, and therefore more radical than was expected or desired by the constituency of the Society; and that it was adopted at a meeting where only fifty-two members voted in the affirmative. It was therefore recommended to the Society in Dr. Squibb's resolutions, to repeal the action of the former meeting with regard to the Code of Ethics, re-enacting the former code of the American Medical Association. They also called for the appointment of a new committee to review the code, to report at the annual meeting of 1884 any changes that might be deemed advisable; the report of this committee to lie over for another year, in order to be brought before the Society in 1885 for its final action. By a skilful political manœuvre, on a call for the previous question these resolutions were submitted as a whole, and defeated by a vote of 105 to 99 (a two-thirds vote would have been required for their adoption), although if the vote had been taken simply upon the resolution rescinding the action of last year it probably would have been carried. This is rendered almost certain by the action of the recognized leader of the new-code men, who near the close of the meeting came forward with a resolution to amend the By-laws by substituting for that code the simpler one "that the only ethical offences for which they claim and promise to exercise the right of discipline are those comprehended under the commission of acts unworthy of a physician and a gentleman." If this code be adopted next year, it, in order to be effective, should be accompanied by a supplemental code defining the ethical conduct to be expected of a physician and a gentleman in his public and professional relations; and for this purpose the Society cannot do better than to adopt the code of the American Medical Association. An incidental but a great advantage of this course would be that it would restore the right of representation in the American Medical Association, where any measures the delegates may wish to introduce affecting the standing or dignity of the entire profession may be tried by a jury of their peers.

The ethical question so occupied the minds of the members that they had little time to listen to scientific papers or inclination to discuss medical topics. A number of papers were merely presented and read by title; others were arbitrarily limited in their time of reading by the Business Committee to eight minutes, eleven minutes, and so on, compelling them to be read in a hasty and incomplete manner; and the discussions were equally neglected. There was little to indicate that the members of the Society were met to deliberate seriously upon medical subjects; these by common consent were accorded a second place, the first thought in the minds of all being medical politics and political methods. An exception, however, must be made with regard to one feature of the meeting,—the annual address of the President, Harvey Jewett, M.D., of Canandaigua, on "Some of the Perils of Life from

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Preventable Disease," which was a thoughtful, scholarly, philosophical production, fully worthy of the occasion and of the old-time reputation of the Society before which it was delivered.

A NEW CITY HOSPITAL.

A PETITION to Councils for the removal of the Almshouse at Blockley from its present situation, in order that the present buildings may be used exclusively for hospital purposes, is being generally circulated for signature by physicians in this city. The fact that the present free hospital accommodations are altogether inadequate and entirely unworthy of a city of the size of Philadelphia has been already mentioned in these columns; but it cannot be too often repeated, for day by day it becomes more emphatically evident. It has long been known that the Philadelphia Hospital, from its propinquity to the Almshouse, has become by constant association identified with it in the popular mind; indeed, it is generally regarded as part of it, so that many of the respectable poor prefer to suffer unaided to being associated in the same institution with paupers. If the proposed arrangements can be carried out, it is possible that in the course of a few years Philadelphia may have as fine a city hospital as Boston or Cincinnati, to which sick or injured strangers may be taken, and where the respectable poor may be received without loss of their self-respect.

If the city adopts the proposed plan, it may be able to set aside a small portion of ground for the erection of a Children's Hospital for Contagious Diseases, which is so urgently needed. The fact that in our neighboring city of New York physicians by exerting their influence have recently succeeded in obtaining both a building-site and an appropriation may encourage some of the faint-hearted here.

WE wonder whether all of our readers noticed an advertisement which has appeared several times in our columns, offering a prize of one thousand dollars for the best essay on "The Probability of the Discovery of a Cure of Malignant Disease, and the Line of Study or Experimentation likely to bring Such Cure to Light." Any one covetous of the thousand dollars should send his essay to J. Collins Warren, M.D., 58 Beacon Street, Boston, before the 1st of December, 1883.

LEADING ARTICLES.

DIFFUSE SCLEROSIS OF THE SPINAL CORD AND MEDULLA OBLONGATA—DISEASE OF FRIEDREICH.

IT had been noticed several years since by Friedreich,* of Heidelberg, that there is a form of ataxia which is distinguished by its appearance in several collateral branches of the same family, and Carré, quoted by Erb,† has reported an instance of a family in which eighteen cases occurred in three generations. It has been ascertained, however, by other clinical observers that this form of disease differs in some important points from ordinary locomotor ataxia, as regards both its symptomatology and its morbid anatomy.

The title of hereditary ataxia, therefore, is not a proper one for this affection, for it may be questioned if in reality it belongs to the category of strictly posterior scleroses, and, even if so, whether it is deserving of the distinctive designation of hereditary, inasmuch as locomotor ataxia itself, according to Charcot and most writers upon the subject, counts inheritance among its principal causes. In place of this term, Féré,‡ a recent writer, suggests the name of "family ataxia," as being more applicable, and scientifically correct. Brousse§ has recommended that it be provisionally replaced by the title Friedreich's disease, which is free from the objection of prejudging its nature until its pathology becomes definitely settled.

* Ueber Ataxie, mit besonderes Berücksichtigung der hereditären Formen, Virchow's Archiv, Bde. lxviii., lxx.
† Ziemssen's Cyclopædia, vol. xiii.
‡ Ataxie héréditaire, Le Progrès Médical, No. 45, 1882.
§ De l'Ataxie héréditaire (Maladie de Friedreich), Paris, 1882.

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Taking up the consideration of some of the clinical features of this affection, it is found occurring principally as a disease of puberty, although it may appear much earlier or later. Cases have been reported as early as at three years of age; and it may be delayed until twenty. Its appearance in several members of the same family warrants the opinion expressed by Kahler and Pick,* that it is connected with hereditary weakness or an arrest of development of some of the medullary fasciculi. Like Duchenne's disease, it preponderates in the male sex; out of forty-four cases compared by Féré, twenty-eight were boys and sixteen girls.

The phenomenon first observed, usually, is a notable weakness in the lower extremities, sometimes in one, oftener in both, which is rarely associated with pain or sensory disorder. The uncertainty of the gait, the irresolute step, with legs spread apart like an intoxicated person (Hammond), is characteristic. Later in the disease, walking becomes impossible, though owing more to a real paraplegia than to want of incoördinating power. In this respect the case differs materially from one of ordinary locomotor ataxia. Moreover, the sluggishness and uncertainty of movement observed in the efforts at walking are soon found to be extending to the upper extremities. At the beginning, oscillations are observed in attempts to make delicate movements. Sometimes the initial phenomenon is an attack of hemiplegia. Muscular incoördination, if present, is not increased by closure of the eyes, and only manifests itself, in the beginning at least, in making voluntary movements. Later the muscles of the trunk and head are affected by irregular movements, and the patient nods as if going to sleep in his chair: the nodding is exaggerated, especially when the patient attempts to move his head; it stops if the body and head are supported. After several years the tongue becomes affected by tremor, articulation becomes hesitating, perhaps is rendered difficult by more or less stuttering, which finally makes speech unintelligible; sometimes there is complete lingual paralysis. Nystagmus,† caused by involvement of the eye-muscles or incoördination of them, may likewise occur. A paralysis affecting all four extremities, more or less complete, often associated with atrophy, may ultimately appear; at the same time there may also occur cramps and temporary contractures. The fulgurant, lancinating pains of locomotor ataxia are wanting in all stages of this affection; sometimes there are pains, but these are erratic and rare, and occur late. Indeed, the troubles of sensibility are among the last to be developed, and are principally manifested by anæsthesia of the lower limbs, never by hyperæsthesia. Electrical changes are also late, but the electro-muscular sensibility apparently disappears before the cutaneous and articular sensibility. Reflex sensibility is not affected, and the sphincters also escape. Pupillary reflex may even be exaggerated. The special senses remain intact; bed-sores do not develop.

Although the intelligence is unimpaired, there are cerebral symptoms which are not without interest. Sudden attacks of vertigo or apoplectiform seizures have been noticed. The latter, in the language of Brousse, are "characterized by a rapid though incomplete loss of consciousness, by complete muscular resolution in the four extremities, general anæsthesia, considerable difficulty in breathing, which is noisy and stertorous, by tumultuous overaction of the heart, very rapid pulse, and notable elevation of temperature."

Whilst the inception of locomotor ataxia is marked by increased salacity, the case is quite different in this form under discussion. In man, impotence is the rule; and in woman menstruation becomes irregular, or there may be dysmenorrhœa.

The course of the disease is slow, but fatally progressive. It may be said to last for a period of from eight to thirty years.

Reviewing the symptoms of the affection and its clinical relations, it is found that although F. Topinard,‡ Carré, Möbries,‖ Erb,§ and Grasset¶ consider it to be a form of progressive locomotor ataxia, Charcot and Bourneville** conclude, from instances coming under their observation, that, in some cases at least, the disease approaches nearer to *sclérose en plaques*,—a view which some of the autopsies do not contradict. There is room for the opinion

* Ueber combinirter Systemerkrankungen des Rückenmarks, Archiv für Psych. und Nervenkrank., B. viii.

† Seeligmüller, Hereditäre Ataxie mit Nystagmus, Archiv für Psych. u. Nervenkrank., Bd. x.

‡ De l'Ataxie locomotrice, Paris, 1864.

§ Ueber die hereditären Nervenkrankheiten (Sammlung Klinischer Vorträge, Volkmann, 1879).

‖ Krankheiten des Rückenmarks, Ziemssen, loc. cit.

¶ Traité pratique des Maladies du Système nerveux.

** Bourneville, Nouvelle Etude sur quelques Points de la Sclérose en Plaques, Paris, 1869.

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that these cases constitute a sort of intermediate class between the two maladies, partaking of the characters of both, but preserving sufficient difference from each to enable them to be distinguished clinically.

The principal points of contrast between these two forms of ataxia are best shown in a tabular form:

Friedreich's Disease.	Locomotor Ataxia.
Age.	
Develops ordinarily at puberty, or earlier.	Generally in middle life, or later; though sometimes earlier.
Symptoms.	
(a) Sensory.	
Troubles of sensation entirely wanting in the early stage. No gastric crises.	Sensory troubles primary and prominent. Gastric crises often marked.—(Charcot.)
Pains occur exceptionally in later stage; of an aching character, not constant.	Fulgurant pains, lancinating, boring, with spots of hyperæsthesia, early and prominent features.
Anæsthesia a very late symptom; paraplegic.	Numbness in the soles of the feet early noticed.
Tendon reflexes not affected, at the beginning at least.	Reflex phenomena usually defective, but may be exaggerated; an early feature.
(b) Motorial.	
Loss of power quite a marked feature early, and becomes more marked later in the disease. It may end in paraplegia. The nodding movements of the trunk and head are distinguishing features also.	Loss of co-ordination *without* early loss of muscular power, in uncomplicated cases; though ultimately paralysis with wasting may occur.
(c) Special Senses.	
Special senses unimpaired: in later stage may have nystagmus, and trouble of vision may arise from defective movement of ocular muscles.	Diplopia; pains in the eyes are frequent; later, amblyopia and amaurosis appear.
(d) General.	
Speech is affected (stuttering), and may be lost.	Speech not affected.
No bed-sores.	Bed-sores may appear.
Closing the eyes does not cause marked increase in symptoms.	Closing eyes while standing or walking, increases the symptoms of incoördination.

Insular sclerosis, or *sclérose en plaques disséminées*, is also to be separated from the malady under consideration. Although the points of difference may be less well marked than those given above, yet the distinction is always to be made. This, which may appear during childhood, is likewise marked by the absence of sensitive and sensory troubles, by disorder of speech, vertigo, control of the sphincters, and the tremor of muscles; but it is in the character of the trembling that a great difference lies. The rhythmic tremor of multilocular sclerosis is easily distinguished from the mere incertitude of this form of ataxia. The two affections are to be further differentiated by the jerking character of the step in multilocular sclerosis, by its exaggeration of the tendon reflexes, by the contractures (which are exceptional in the other affection), by the frequency of strabismus and diplopia, and especially by the troubles of intellection, which are completely wanting in the disease of Friedreich, the progressively fatal character of which is also in contrast with the irregular intermittent course so characteristic of the former.

The review of the symptoms, therefore, warrants the classification of this disease apart from the other forms of spinal disorder which have been named. Pathological anatomy further justifies this course. According to Féré,* whose interesting paper has been largely drawn upon in preparing this article, the principal lesions occurring in this malady are the following:

Besides slight lesions of chronic spinal meningitis, there are found different alterations in the spinal cord and medulla. The columns of Goll are much affected; so is the column of Burdach, especially in its external fibres. The sclerosis appears less pronounced in the dorsal region than in the cervical and lumbar portions of the cord; in the latter it is generally most marked. The disease is not, as the rule, confined to the posterior columns, but usually extends to the lateral, and the anterior columns even are said to be often irregularly affected. Brousse asserts that the columns of Clarke may be altered; and in at least one case lacunæ have been found in the gray substance. Schultze has noticed a general diminution in the size of the spinal cord, taken as a whole; this also is true of the medulla oblongata, where the sclerosis is seen extending into the posterior pyramids and may be traced across the floor of the fourth ventricle to the hypoglossal nucleus. The posterior roots are ordinarily atrophied and indurated, and the hypoglossal, brachial, crural, and sciatic nerves are more or less atrophied. Although Friedreich (apparently misled by the autopsy of his first case, in which disease of the posterior columns existed) believed that the disease commences in the posterior columns in the lumbar region, and that the alteration of the medulla spinalis was only consecutive to a posterior meningitis (thus explaining the predominance of the peripheral lesion), it has been since demonstrated that sometimes the disease is most marked elsewhere, for instance, in the vicinity of the canal of the ependyma. In other cases the bulbar lesions are very marked, and, indeed, Hammond

* Loc. cit.

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declares that it is in this region that the disease begins. He is disposed to believe that a cerebellar lesion is present, to which must be attributed the vertigo, the nystagmus, the peculiar staggering gait, and the occipital pain which some of his cases complained of.

The morbid anatomy suggests the relationship of these cases to those of combined postero-lateral sclerosis described by Prevost,* or the cases of sclerosis of the posterior columns coincident with foyers of degeneration in the spinal cord observed by Westphal† and Schultze;‡ but these cases, which are not identical from an anatomical point of view, differ also clinically from those of Friedreich's disease. The latter is properly a diffuse sclerosis of the spinal cord and medulla oblongata, affecting the different columns of the cord, predominating in the posterior columns, it is true, but invading the others rapidly and progressively. Thus its clinical analogies to multilocular sclerosis are explained by the distribution of its lesions, which likewise accounts for the very marked variation in the symptoms from those belonging to uncomplicated posterior sclerosis, or typical locomotor ataxia. F. W.

FORMATION OF SUGAR IN THE LIVER FROM PEPTONE.

PROF. DR. SEEGEN reports (*Pflüger's Archiv für Phys.*) the following experiments in regard to determining the question of the formation of sugar from peptone in the liver. They were made by—

(*a.*) Feeding.

(*b.*) Injection.

(*c.*) With fresh liver in which the life of the cells was kept up for some time by their mixture in an acid blood.

(*a.*) The feeding experiments were with dogs of about twelve pounds' weight, to which he gave fifteen to twenty grammes of peptone in three hundred grammes of water, in divided doses, two hours, one hour, and one-half hour before the examination. The animals were killed by cutting the carotids, a piece of liver removed, weighed, and thrown into boiling water,—the whole occupying but one to two minutes. The piece was boiled and rubbed until the residue showed no trace of sugar; the decoction was treated with alcohol, and the sugar collected from the precipitate.

Earlier experiments with Dr. Kratschmer had fixed the normal quantity of sugar in the liver at 0.45 to 0.55 per cent.

In the present experiments, out of ten dogs only two showed the normal quantity; in the eight remaining the quantity was essentially increased, even to 1 to 1.5 per cent. This shows an increase of 50 to 200 per cent. over the normal quantity.

(*b.*) To study the effect of direct injection, dogs were narcotized with opium and chloroform, the linea alba incised, and a branch of the portal system found, into which the peptone was directly thrown. After thirty or forty minutes, a piece of the liver was excised, thrown into boiling water, and treated as above. In five experiments one was negative, the other four showed an increase of two to three times the normal quantity of sugar. The blood in the vessels running from the liver contained a marked increase of sugar. The quantity rose in one case to 4 per cent.

(*c.*) A piece of liver from a freshly-killed dog was mixed in a retort with blood and peptone and subjected to a current of air. In this mass a considerable quantity of sugar was found: so that it may be concluded that peptone is the material from which sugar is built in the liver. These experiments show that the liver is one of the main points for the metamorphosis of peptone, and that sugar is one of the products of this metamorphosis. Still, it is not probable that all the peptone is changed in the liver. R. S. H.

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* Ataxie locomotrice; Sclérose des Cordons postérieurs compliquée d'une Sclérose symétrique des Cordons latéraux (Archives de Phys. Norm. et Path., 1877)

† Archiv für Psych. und Nervenkrank., Bd. ix. H. 2, p. 389.

‡ Ueber combinirte Strang-Degenerationen in der Medulla-spinalis (Virchow's Archiv, Bd. lxxix.).

CORRESPONDENCE.

FAIR PLAY.

MESSRS. EDITORS: In the *Medical Times* of January 27, under the caption "The Adulteration and Substitution of Drugs," etc., are some statements which are liable to be misunderstood, and I trust you will permit a few remarks in reply.

There are a few physicians in Philadelphia who seem to take great delight in finding out the derelictions of some druggist and rushing them into print, commenting on them, and endeavoring to create in a general way a feeling of distrust against the integrity of the

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pharmacists of this city as a class. It would be difficult in these days to find all the members of any one class in the community, let them be of the medical profession, or pharmacists, tradespeople, mechanics, or whatever you choose, entirely perfect and possessed of such remarkable traits of character that it would be impossible for them to do wrong.

The paper referred to seems to lay stress on information obtained by a relief-clerk who visits various stores as an assistant, when occasion requires, and he reports the habit in these stores of substitution, etc. The article states that "the Trade Association of Philadelphia Druggists made a denial of the charges." This assertion conveys an incorrect impression of the facts. The newspaper articles made charges against the "Druggists of Philadelphia" (as a class); this the Trade Association did deny. But they did not deny that it was possible that one here or there might be picked out who might be guilty of wrong-doing, and at once appointed a committee to investigate the matter, giving them power to prosecute the offenders if they thought it proper. They found two cases, but the evidence was of such an uncertain character that the solicitor of the Association thought it not expedient to push the matter.

I agree with the writer of the article that no honest druggist (and I am glad to know there are many such) will fear a decoy prescription; at the same time, I don't think it the most commendable way to get information. The abuses the writer includes under three heads,—viz., inferiority, deficiency in quantity or quality, substitution. That these abuses exist in some localities it is with regret acknowledged; but what is the remedy obviously best in such cases? Let such people severely alone, and have your dealings at other places where you feel you will be honestly treated.

Allusion is made to the deficient quantity and great variation in "ready-made pills." If the physician would write his recipe for such constituents and order it to be compounded by an apothecary in whom he had confidence, I do not think this complaint would be so common. But the prescription comes ordering "Smith's Gelatin-Coated Pills" or "Jones's Sugar-Coated Pills," etc., and the pharmacist is compelled to keep a large stock or variety of these ready-made preparations, made in large quantities he knows not by whom or how!

It is a growing mistake that the medical profession do not encourage the retail pharmacist more and give him opportunities to employ his skill; not make of him a dealer in commodities already made, so that all he has to do is to hand them out, like a merchant his yard of cloth or pound of sugar.

If the writer of the article will make known to the Trade Association of Philadelphia Druggists the names of the proprietors of the stores where it is the rule to practise substitution in compounding prescriptions, or where prescriptions ordering quinine are compounded and it is *known* quinine has never been in the store, or the two stores where quinia and cinchonidia in equal parts are always used, or the store where a prescription was compounded ordering four drachms of quinia and none was put in, he will be doing a substantial benefit to honest apothecaries and the community. I heartily agree with him that no necessity exists for encouraging the wholesale manufacture of pills, which may lie for months and perhaps years before they are used: let them be made as needed by a responsible pharmacist, and the physician will be less disappointed in the effect.

It is a mistake to call a druggist "a first-class druggist" who would make suppositories of wax when butter of cacao was ordered. He is not deserving of such a title.

I trust that the following sentiments expressed in the discussion of the paper will be widely spread and duly emphasized,—viz.: "And he was, in general, opposed to the plan of using ready-made prescriptions. He thought that each case should be prescribed for specially, and each case might require a variation of remedies which the doctor only knows;" also "he thought that it is the duty of the physician to inquire into the standing and ability of apothecaries."

In the paragraph following, "the several serious and indefensible substitutions made by well-known and respectable pharmacists" should be made known to the Trade Association, for the purpose of preventing a repetition of such practices.

The extravagant terms used by the gentleman in referring to the custom of pharmacists renewing prescriptions are quite out of place, and not warranted by the circumstances. In an interview with this same gentleman he was shown that the apothecary had no option in the matter,—that whereever a case of the kind (as far as the writer's knowledge goes) has been decided by a court of justice the ownership of the prescription is with the patient, to do with it as he pleases, and I would like the gentleman to show a case decided differently. If a physician, for reasons of his own, desires that the prescription should not be repeated, and so instructs the patient when he hands it to him, and *writes* on the face of the prescription, "Not to be repeated," any pharmacist who would disregard such *written* instruction would be as much at fault as if he were to put paregoric in when laudanum was ordered. It is a part of the instructions of the doctor to the pharmacist. A printed heading "not to be renewed," and without an understanding with the patient to that effect, I do not consider binding.

To sum up this matter in a few words, let physicians and pharmacists work more in harmony with each other, and, if there are any

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black sheep in either flock, let them alone, avoid them, and they will soon find it to their advantage to leave off their old ways and follow after that which is good, truthful, noble, and elevating, and so gain the respect of their friends and confrères.

Very truly yours,

AND. W. BLAIR.

ATROPIA-POISONING—MORPHIA AS ANTIDOTE.

MR. EDITOR,—I take the liberty of calling your attention to a case of atropine-poisoning occurring in the person of a physician near Shannon, Mississippi, and treated by Dr. Carothers of that place.

He had swallowed by mistake on an empty stomach one grain by weight of atropine. He was not aware of his mistake until symptoms of atropine-poisoning occurred, consisting of dilated pupils, dry and hot skin, dry throat, and drawling and incoherent speech, followed by convulsions. Dr. Carothers injected hypodermically sixteen to eighteen grains of morphia, and under its influence the patient recovered. There were no symptoms of narcotism from the use of the morphia, which would seem to show that the antagonism between these drugs is mutual. The patient not having been addicted to the opium habit, the amount of morphia injected would have produced death had there been no antagonism by the atropine. The limited protective influence of atropine in opium-poisoning is clearly established: do not the foregoing facts tend to establish the converse?

Yours, etc.,

J. B. COX, M.D.

NOTES FROM SPECIAL CORRESPONDENTS.

CINCINNATI.

THE Academy of Medicine recently appointed a committee to confer with a committee from the College of Pharmacy in reference to deciding when the new Pharmacopœia should come into general use. The joint committee reported that druggists shall fill all prescriptions in accordance with the U. S. P. of 1870, unless otherwise specially designated in the prescription, until July 1, 1883, after which the preparations of the new Pharmacopœia are to be used unless otherwise ordered. Of course this applies only to the Cincinnati physicians and pharmacists.

Dr. Clara M. Ellsbury, of this city, and Dr. Juliet M. Thorpe, of Covington, Kentucky, have this winter opened a dispensary for the treatment of the diseases of women and children. It is modelled somewhat after the out-door department of the New England Hospital, where Dr. Ellsbury received her preliminary practical training. These young ladies are both graduates of regular medical colleges, the one from Ann Arbor, Michigan, and the other from the Woman's Medical, of Philadelphia, and are both members of the Academy of Medicine. They are energetic workers in their chosen profession, and are achieving well-deserved success.

The Academy of Medicine has now three female members, the third being Dr. Julia Carpenter, who was the first lady member. Aside from a number of nondescript practitioners, these are the only female physicians here.

In my last letter I informed your readers of the incongruous character of the Board of Health. Since then the members, with one exception, have resigned. There is a bill now before our State Legislature to abolish the present Board, and to empower the judges of the Superior Court to employ a Health Commissioner at a yearly salary of $3600, he to have the power of selecting his own assistants at a salary of $300 per year each.

Scarlet fever has been raging with unusual severity during the fall and winter. In some quarters it is characterized by a high degree of malignity,—some weeks the mortality from this disease being greater than from any other single affection.

There is a great deal of sickness here now, which will, doubtless, be much increased on the subsidence of the high water. Thousands of houses are partly or wholly under water, and the dwellers in the inundated districts are already beginning to suffer from the dampness of their dwellings.

February 12, 1883.

CHICAGO.

OUR Health Commissioner is now in your city, seeking information that may be utilized in the construction of a morgue. We have been practically without that very necessary structure, the building used for the purpose being a wretched affair, infested by swarms of rats, which in some instances have mutilated bodies beyond recognition.

The State Board of Health has lately passed a rule upon the question of examination for matriculation in all our medical schools,—a sort of protective tariff upon home production. That this rule can result in little good with the present composition of the Board there can scarcely be a doubt. Some of the schools have during several years past required matriculants to pass theoretically an examination upon certain designated branches. Practically the examination has amounted to nothing, and there is no reason why the present action of the State Board should change it.

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The affairs of our county hospital have at last received long-needed attention. The last grand jury, being respectable, did its work respectably. It makes charges of wilful neglect or careless management, if not of inhumanity which is actually and morally criminal; of general looseness and lack of system, —cash belonging to patients finding its way into devious paths, etc. The jury suggests the organization of a Board of Supervision for all the city charities; and by having the members appointed by the judges of the courts or by the governor,—preferably the former,—there would be less of the bad (political) element in the composition.

The tenement-house question is one forcing itself upon the attention of the public. The health and well-being of a large proportion of the working-classes of this city must depend upon some prompt action; as it is now, more than half of their hard earnings is required to pay an exorbitant rent for the most wretched, crowded, and filthy quarters to be found in any city.

Our new St. Luke's Hospital is to be of brick, and will be located upon our most public driveway,—a location not without its objections. Though the winter has been the most rigorous experienced for many years, the health of the city has been fairly good.

Our State Hospitals for the Insane are issuing the usual biennial report. Most of them give a very extended space to the discussion of buildings, grounds, and improvements; but, with the exception of one report, which treats of efforts to do away with mechanical restraint, there is nothing of value or interest as regards the class of diseases peculiar to these institutions.

February 14, 1883.

PROCEEDINGS OF SOCIETIES.

NEW YORK ACADEMY OF MEDICINE.

STATED MEETING, FEBRUARY 1, 1883.

FORDYCE BARKER, M.D., LL.D., President, in the chair.

MR. F. SEYMOUR HADEN, of London, England, was invited to take a seat on the platform.

After the reading of the minutes of the previous meeting, and the reports of committees, the Vice-President, Dr. R. F. WEIR, took the chair, and THE PRESIDENT delivered his annual address.

In his opening remarks THE PRESIDENT said, "I cannot commence my remarks in the usual form by thanking you for again placing me in this position, for I had earnestly desired that the responsibility and labor involved in the effort to discharge the duties of the office which I have had the honor of holding by your kind partiality might end with my second term of service. At a former meeting of the Academy I stated my reasons for declining to be a candidate for renomination, which I hoped would be as conclusive in influencing the action of the Academy as they were in my own mind. . . .

"But the general sentiment has been expressed to me so unequivocally, not only by individual solicitations by those who, by their work, have shown the greatest interest in the future of the Academy, but by the unanimity of your suffrages, that I feel the duty is plain for me to sacrifice personal feelings, and to yield personal convictions to the expressed judgment of the Academy. . . .

"I wish still further to relieve my mind by avowing not only my warm appreciation of this recent expression of your confidence, but my profound thanks for the aid and constant support which I have received, not only from the office-bearers, but from the Fellows of the Academy as a body and as individuals. . . . I think the character and high purposes of the Academy have been gloriously illustrated by the fact that in its past sixty-four sessions all have worked together most harmoniously and not the slightest jar or irritation has occurred to disturb friendly personal relations. . . .

"The past and future of the New York Academy of Medicine seems to me the most appropriate theme when precedent has made it the duty of the chair to take up the time which is usually occupied in a more important and profitable way in scientific work.

"Of the one hundred and eighteen leading physicians and surgeons of this city who, thirty-six years ago, had the happy conception to unite in organizing this Academy of Medicine, there are now living but twenty-four." Some of these, who had occupied positions of special trust in the Academy, were then mentioned, among whom were Drs. John G. Adams, Samuel T. Hubbard, Willard Parker, James Anderson, A. C. Post, and S. S. Purple.

The library of the Academy now contained over nineteen thousand volumes and between five and six thousand pamphlets, and it was daily increasing by the generous donations of its friends. The circulating department had been placed on a most efficient basis, and the journal department was being kept up to its former high standard of excellence and completeness.

Passing to the *personnel* of the Academy, the Statistical Secretary had reported during the past four years the death of thirty-five of the Fellows, among whom were Freeman J. Bumstead, James R. Wood, John W. Draper, George M. Beard, and others who were well known in all parts of the world where there is a medical literature.

During the past four years the Academy had elected and received one hundred and forty-seven new resident Fellows.

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"I think the Academy has every reason to be satisfied with the amount of scientific work which has been done during this time, as sixty-six papers of unusual merit and importance have been read, on subjects pertaining to pathology, general medicine and surgery, therapeutics, and the various special subjects of obstetrics, gynæcology, dermatology, laryngology, otology, and ophthalmology, and the reading of these papers has been followed by able discussions, which have attracted notice and been largely reprinted both in American and in European journals. I can repeat what I have said on a former occasion,—that these discussions have been very valuable, because they have called out our ablest and best men, known to be experts in the special subjects of the papers read, and they have given the results of their careful study and large experience. . . . I hold it to be one of the great missions of this Academy to bring out and develop the young men by its library and its scientific work, who are to take care of its interests and give the stamp of character to the Academy and the medical profession of this city in the future. . . .

"The mental activity of the profession in this city has been wonderfully developed, and its contributions to our literature have wonderfully increased, since the organization of the Academy. The number of medical works by New York authors in the fifty years from 1800 to 1850 was one hundred and nine. In the ten years from 1850 to 1860, New York writers published sixty-five medical works; from 1860 to 1870 the number was sixty-nine, and from 1870 to 1880 the number is one hundred and two, the whole number in the last thirty years being two hundred and thirty-six. To this it should be added that New York writers have also, in this period of thirty years, contributed, according to the most accurate estimates that I can obtain, at least twenty-five thousand pages to the medical periodical literature of the country."

We have no cause for anxiety in regard to the future of the Academy as it relates to scientific work. The one thing needed, in order that its full mission might be accomplished, was that it should be placed on such a financial basis as to secure it the means of doing all its important work. The medical profession had contributed liberally of its means towards this end. "No city has a greater accumulation of individual wealth than New York. None has greater liberality when properly appealed to and when the intelligence and judgment are convinced of the justice and necessity of the appeal. This has been amply shown in its liberal provision of hospital accommodation for the sick poor, and in numerous other directions. But it has done little for the profession on which it relies for the preservation of their health and lives; and I am convinced that this is simply because the necessity and motives for giving such aid have never been laid before them. Their liberality has, consequently, never taken this direction. In the Continental countries of Europe such an organization as ours would be effectively assisted by appropriation from the state. In Great Britain it would be stimulated to active work and aided by liberal contributions from private individuals." Reference was made to notable examples of this kind.

"In conclusion, I beg to express the hope that all of us feel that our duty to the Academy is a duty that we owe to our profession, that its prosperity and usefulness and its good and active work may continue with progressive advance, and that the motto of our loving-cup may always be a controlling sentiment with us: 'May peace and love be multiplied unto us!'"

After some remarks appropriate to the occasion, offered by Drs. Detmold, Post, Mr. Haden, of London, and Dr. Weir, the Vice-President, the latter then being in the chair, the following resolutions, offered by Dr. W. M. Carpenter, were seconded and unanimously adopted:

"*Whereas*, To those of us who have been accustomed to attend the meetings of this organization, the concise and comprehensive résumé of the history and present condition of the New York Academy of Medicine, to which we have listened, has passed before us like a pleasing and edifying panorama:

"Be it *Resolved*, That we hereby express our hearty appreciation of the fidelity and untiring industry of our President for the welfare of this institution.

"*Resolved*, That we are ever ready to respond to his call, and indulge the hope that what we have received from our most worthy founders, whether it be physical or scientific, constructed of brick and stone, we shall be able to transmit constructed of solid marble."

The Academy then adjourned.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

A CONVERSATIONAL meeting of the Society was held at the hall of the Society, January 17, 1883.

DISCUSSION ON THE EFFECTS OF IRRITATING THE OPTIC NERVE.

Dr. Shakespeare remarked that it was important to know how many of the patients examined had the optic nerve in such condition of disease as to render it incapable, or very slow, to transmit impressions. Positive results ought to outweigh any number of negative results, and many of the diseases requiring enucleation were of such character as to destroy, or at least greatly impair, the function of the nerve. Moreover, the fibres of this nerve suffer secondary atrophy, like other nerves, after very prolonged interruption of

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conduction. Another point was that the optic nerve is surrounded by sensitive fibres which convey the sensation of intense pain, which would divert the mind from other sensations, such as those of light. A number of cases, similar to those reported here to-night, have from time to time appeared in the ophthalmological and pathological journals. He recollected, among others, six cases reported by Schmidt-Rimpler, in two of which positive impressions of light were obtained, but in the other four only negative results. Dr. Shakespeare considered that an abundance of positive proof exists that a sensation of light is usually experienced when an optic nerve in good condition is irritated.

Dr. W. R. D. Blackwood remarked that he had experimented with electricity on the optic nerve of both sound and diseased eyes to learn what impression, if any, was made by mechanical pressure or irritation. He had in one case, where the right eye was enucleated and the other was useless from dense cataract, found that GALVANIC currents of low *tension* but great *quantity* evidently produced the sense of light, and phosphenes, ordinarily gotten by pressure on the ball in a dark room, and this in both eyes. FARADIC currents of much higher *tension* but of little *quantity* gave almost negative results; yet, singularly, STATIC currents of still less *quantity* but of extreme *tension* gave very pronounced results. In the latter trials the electrodes were pressed firmly on the surface, so that the spark consequent on disruptive discharge could not occur, and the flash seen was therefore not the light of the spark itself (which was not produced), but must have been the effect of nerve-stimulus. The speaker was unfamiliar with ophthalmic matters, except in a general way, but he gave the above for what it was worth, and was himself inclined to think that irritation of the optic nerve *did* (at least in some instances) produce the sensation of light, even in cases after enucleation, provided the nerve was not atrophied beyond the optic chiasm.

Dr. Eskridge desired to know whether the experimenter had pressed upon the ball of the eye before enucleating, in order to ascertain whether the optic nerve to be experimented upon was capable of conveying impressions of light.

Dr. Landesberg, in closing the discussion, said that all physiological works contained the dogmatic statement that when the optic nerve is divided a sensation of light is produced, and it was with a view to test the accuracy of this that he made the experiments. It appeared that the assertion rested in part upon the fact that a French surgeon, in operating for cataract by reclination, pushed the needle too far and pricked the optic nerve, and the patient experienced a luminous sensation; also upon the observation of Magendie and Dieffenbach, that mechanical compression of the nerve gives rise to a sensation of light only. His own experiments, however, had shown that such result was not always produced. Schmidt-Rimpler, Hirschberg, Rothmund, Szokalski, had also had negative results. In the first case reported to-night the optic nerve may have been atrophied, but Dr. Landesberg did not draw any conclusion from this one. In the seventeen cases which gave the material for the investigations, the nerve was in condition to convey the stimulus to the brain. He considered it highly doubtful whether a patient undergoing such a painful operation as enucleation, without anæsthetics, woud be able to tell exactly what his sensations were during division of the optic nerve. In answer to a question by Dr. Mills, he said that the phosphenes were caused by the mechanical irritation of the retina.

REMARKABLE CASE OF DEFECTIVE DEVELOPMENT.

Dr. Atkinson brought before the Society a man, aged 40 years, who presented the following peculiarities. He has never had teeth, nor any distinct growth of hair on the scalp, except the downy hairs such as are seen in early infancy. He is also destitute of the sense of smell, and almost of that of taste. His skin appears to be unprovided with sweat-glands, as he never perspires, and when working actively he is obliged to wet his clothes in order to moderate the body-heat. He can sleep in these wet clothes in a damp cellar without catching cold. His jaws present the appearance seen in persons who have lost all their teeth. Hair is present in the axillary and pubic regions, but the downy hair which is usually seen over the skin at large is wanting, except on the scalp. His maternal grandmother and uncle were similarly defective, and the present patient was among the younger of twenty-one children. He was a man of very good health, having never been seriously sick, and, although not able to chew his food in the ordinary manner, he never suffered from dyspepsia. The secretion of urine was unusually abundant. He was married, and had eight children, among whom were two girls, both of whom lacked a number of teeth.

DISCUSSION ON THE FUNCTION OF THE CHORDA TYMPANI.

Dr. Mills said that some of the clinical facts observed by him would indicate the correctness of Dr. Burnett's views. He had seen cases in which disease of the pons-medulla region was supposed to be present, with which were associated defects of speech that could not be well understood except on some such theory. A case of this kind was recently at the University Hospital. Another was a case of double facial paralysis, in which the patient, after losing her hearing in both ears, had also very quickly lost the power of speech. He wished, however, to know how to explain

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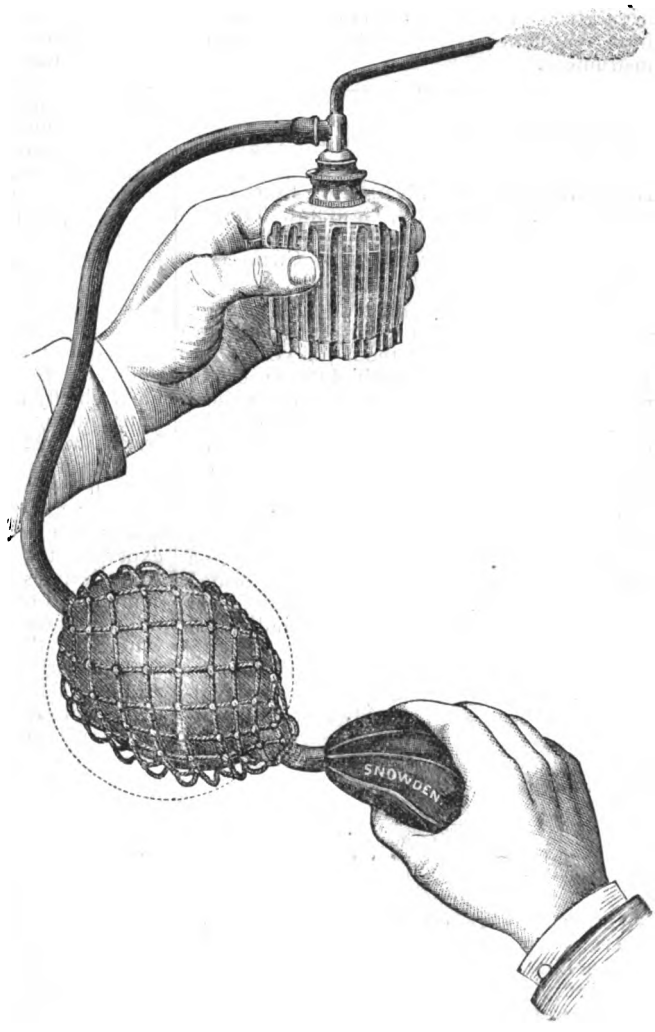
the cases in which peripheral facial paralysis existed, with disturbance of the sense of taste, and in which the disease can be located along the trunk of the facial nerve, where the chorda tympani nerve is supposed to be in contact with the facial.

Dr. Bruen referred to an instance he had recently witnessed in which seventy-five grains of quinine were taken inside of twelve hours to break up an obstinate malaria, and on the next day eighty grains additional, before the physiological effect was produced. Total deafness, with ringing in the ears, and with some interference in speech, ensued. The difficulty in speech consisted in a thickness of articulation, and inability to pronounce distinctly. Sounds were uttered in a stuttering manner. He had never seen moderate doses produce such effects upon the movements of the tongue, and the case had occurred to him as bearing upon Dr. Burnett's paper. In reply to a question, Dr. Bruen said that he could not speak definitely as to whether the sensation of taste was affected.

Dr. Burnett, in closing the discussion, said that Dr. Bruen's case was an interesting one, and seemed to tend to confirm the view that the chorda tympani nerve is one of motion rather than of taste. It had been asserted by some writers that suppurative disease in the tympanic cavity is attended with disturbed sense of taste, but of this he had never been thoroughly satisfied. The clinical opportunities for verifying the statement were infrequent. Some filaments of the chorda tympani might pass to the sublingual region, and thus take part in the sensation of taste, but if Sapolini's theory is correct, that most of the fibres go to the muscles of the tongue, the nerve must be motor. Dr. Bruen's case was in harmony with this view. If quinine produced congestion of the origin of the auditory nerve, it would congest also the origin of the chorda tympani from contiguity; if, on the other hand, it congested the tympanic cavity, the chorda tympani could be affected by such congestion in its passage through the tympanum. In regard to the interpretation to be put upon defects of speech in facial paralysis, as in the case mentioned by Dr. Mills, it would be necessary to know whether such defect depended on paralysis of the muscles of the tongue or of the lips and cheeks, as one cause might be quite independent of the other, if the chorda tympani is an independent nerve.

ATOMIZERS.

Dr. W. R. D. Blackwood exhibited a set of



three atomizers as made by Mr. William Snowden, of No. 7 South Eleventh Street, in this city. The perfect steadiness of the jet, its volume and firmness of spray, and the distance to which it was projected, were shown by the speaker, who commended the instrument highly in the treatment of post-nasal catarrh, in laryngeal difficulties, and for all aural and nasal disorders. The finish, especially of the rubber, and the simplicity yet convenience

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in operating it, rendered its name appropriate, —"the perfect atomizer." The jet was adjustable upward, downward, and forward, and a perfectly *continuous* spray was obtained with little effort by means of the elasticity of the subsidiary bulb, which could be distended to the point indicated by the dotted line, over-distention being prevented by the netting, which held it and averted rupture. No atomizer yet produced approached those exhibited in practical adaptability to many uses; and an important item was the moderate cost of the instrument.

REVIEWS AND BOOK NOTICES.

A DICTIONARY OF MEDICINE, INCLUDING GENERAL PATHOLOGY, GENERAL THERAPEUTICS, HYGIENE, AND THE DISEASES PECULIAR TO WOMEN AND CHILDREN. Edited by RICHARD QUAIN, M.D.

More than one hundred and fifty medical writers, many of them men of the highest eminence, nearly all of them natives of the British Islands, have deposited their sacks of wheat in this overflowing granary of medical lore. There are over eighteen hundred double-column pages of fine, close print, and it is evidently hopeless to attempt any proper review or even notice of such a book in our brief columns. It is a condensed library: moreover, the articles vary in style, force, power, and every scientific and literary quality,—a heterogeneous family of children, uniformed and drilled by careful editing into sufficient accord, and yet preserving those individual characteristics born with them.

To physicians desiring a book of such character we strongly commend the present volume, whose sale will probably be largest outside of the profession, with the resultant of mixed good and evil that follows a little medical acquirement by the laity.

GLEANINGS FROM EXCHANGES.

DEVELOPMENT OF LIVING GERMS IN WATER.—At a recent meeting of the Manchester Literary and Philosophical Society, Dr. R. Angus Smith contributed some interesting facts on water-analysis. Dr. Smith stated that he had learned from Dr. Koch, of Berlin, the use of gelatin for preserving the indications of organic vitality. About two and a half per cent. of gelatin well heated in a little water is mixed with the water to be tested, —the mixture forming a transparent mass, which is not movable like the water itself. When soluble or unobserved matter develops from the organic matter of the waters tested and makes itself visible in a solid and insoluble form, it does not fall to the bottom, but each active point shows around it the sphere of its activity. The gelatin preserves the whole action, so far as the more striking results are concerned, and keeps a record for a time both of the quality and of the intensity of life in the liquid. Dr. Smith speaks of the more striking effects, which are clear and abundant, every little centre of life making itself apparent to the eye, and sometimes expanding its development to reach both sides of the tube. It seems to him now essential that all chemical examination of water should be supplemented by an inquiry, like this of Dr. Koch's, into the comparative activity of the living organisms. When a centre acts, it makes around it a sphere in some waters; and the sphere, which has the appearance of a thin vesicle, is filled with liquid. These spheres form in a day or two, according to the water, and at the bottom is a white mass, chiefly containing active bacteria. The liquid filling the spheres may be taken out by a pipette and examined, as also the bacteria which lie at the bottom. Dr. Smith has not yet examined a sufficient number of specimens of water to give general rules, but hopes to do so. His observations have been confined chiefly to the Manchester district, hill-water, impure brook- and pond-water, Mersey, Irwell, and Medlock water, and canal-water. In certain specimens of Manchester water the spheres appear on some days very few; on other days the amount is enormous and heavy, the whole of the tube in which the experiment is made being filled with spheres. At such times the water is highly impure and complained of by the public. The globules do not show themselves in strong sewer-water, but the whole mass becomes turbid, and the surface of the gelatin becomes liquid and full of life. This liquid condition gradually increases, until the whole is reached. Dr. Smith says that, when the tests are sufficiently developed, chemists must prepare for a new condition of things.—*British Medical Journal.*

TETANUS (?) CURED BY GELSEMIUM.—The report of a case under the care of Dr. John B. Read, of Tuscaloosa, Alabama, appears in the *British Medical Journal*, in which tetanic convulsions in a strong, healthy mulatto woman, 20 years of age, were stated to have been caused by a wound in the foot received but two days before. The wound was laid open and packed with morphia, no foreign body having been detected. Fluid extract of gelsemium sempervirens was given in doses of twenty minims every second hour, alternating with the same quantity of liquor potassæ at the same intervals. The dose of gelsemium was increased to forty drops every two hours on the following day. By the end of the fourth day the rigidity of the jaws was entirely relieved, and the general spasms recurred with less frequency. The remedy was

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now reduced to the former dose, at which it was continued to convalescence. It is said that the extract was fresh from the laboratory of Tilden & Co., and was given for a week in amounts closely approximating half an ounce to an ounce in twenty-four hours. It produced no other sensible effect than that of controlling the spasms and arresting the disease. Dr. Read says, "There was no dizziness, no dimness of sight, no double vision, and no prostration of strength, as I have seen in other patients with other diseases from much smaller doses of the same preparation." [If the patient really swallowed these large doses of an active preparation without producing the ordinary physiological effects, the case is worthy of record, whether she had tetanus or not. It is not, however, reported for the purpose of fixing the ordinary dose of gelsemium, the fluid extracts of which may vary greatly in their effects.]

ALTERATIONS OF THE SPINAL CORD IN POISONING BY PHOSPHORUS.—The results of the researches of Dr. Danillo (*Gazette Méd. de Paris*, 1882) on this subject are as follows. 1. The alterations of the spinal cord in phosphorus-poisoning belong to the class of myelitis, either central or diffused. 2. In cases of acute poisoning, the central nervous system contains deposits of pigment of hæmatic origin. This has, heretofore, not been noted. 3. Large doses of phosphorus give rise to a central myelitis along the whole length of the cord, with the formation of extravasation and pigment. Smaller and repeated doses give rise to a diffused myelitis, affecting the gray and the white matter. 4. Phosphorus thus presents us with a powerful means by whose aid we may excite, at will, an inflammatory irritation in the spinal cord, either localized in the gray matter, or diffused. 5. A certain number of morbid nervous phenomena, observed during life, are to be attributed to the effects of one or the other of these two kinds of myelitis.

MISCELLANY.

DEATH OF PROF. RAND.—Benjamin Howard Rand, M.D., formerly Professor of Chemistry in the Jefferson Medical College, and for several years Dean of the Faculty, died on February 14 at his residence on Summer Street, in this city. He was fifty-six years of age, and was born in this city. He was graduated from the Jefferson Medical College in 1848, and two years later was elected Professor of Chemistry of the Franklin Institute. From 1852 to 1864 he was Secretary of the Academy of Natural Sciences, and for several years he occupied the chair of chemistry in the Philadelphia High School. He was subsequently elected Professor of Chemistry in the Pennsylvania Medical College at its foundation, a position which he retained until the school ceased to exist in 1861. He accepted the chair of chemistry in Jefferson Medical College in 1864, from which ill health forced him to retire in 1877. He was elected a Fellow of the Philadelphia College of Physicians in 1853, and a member of the American Philosophical Society in 1868, and was also a member of the American Medical Association. He was the author of several elementary works on chemistry.

Dr. Rand was liked by students, as his lectures were always clear, practical, and instructive. In his course at Jefferson Medical College he kept the teaching of the medical relations of his subject in the foreground; and therefore those who had the privilege of attending his lectures were distinguished by their acquaintance with applied chemistry in practical medicine rather than by their familiarity with chemistry in its scientific aspect. For several sessions before resigning his position, his state of health was such as to interfere greatly with his teaching, and his later students heard him at a great disadvantage. He had several attacks of pneumonia, which he attributed originally to accidentally inhaling arseniuretted hydrogen during a medico-legal investigation. Dr. Rand was uniformly agreeable in his manners, had a high sense of honor, was sociable in his feelings, and withal a man of strong convictions and possibly some prejudices. He was punctual in his engagements, punctilious in the performance of promises, and faithful to his friends. As Dean of the College he was kind and obliging to the students, always sympathizing with their troubles and ready to listen and to advise. After he severed his connection with the school he lived in retirement, visited only by a few of his friends that had formerly known him, and by whom he will not be soon forgotten.

A PROPOSED ACT TO REGULATE DISSECTING.—A bill to constitute a Board for the distribution of unclaimed human bodies among the different institutions entitled to dissecting material has just been brought before the Legislature by a committee of physicians from the several anatomical schools and colleges in this city. The Board is to consist of the professors of anatomy, the professors of surgery, the demonstrators of anatomy, and the demonstrators of surgery of the medical and dental schools and colleges of this Commonwealth which are now or may hereafter become incorporated, together with one representative from each of the unincorporated schools of anatomy or practical surgery within this Commonwealth in which there are, or from time to time at the time of the appointment of such representatives shall be, not less than twenty-five scholars.

Under the proposed bill, all public officers having charge or control over dead human bodies are required to notify the Board of that

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fact, and all colleges, before receiving such bodies, must first file a one-thousand-dollar bond conditioned that cadavers are to be used only for the promotion of medical science within the State. For trafficking in bodies, or carrying them outside of the State, the offender shall be deemed guilty of a misdemeanor, and be liable to a two-hundred-dollar fine and a year's imprisonment.

PENNSYLVANIA HOSPITAL.—COMPLIMENTARY DINNER TO MR. WM. G. MALIN.—The resignation of the steward of the Pennsylvania Hospital, Mr. Wm. G. Malin, after a period of service to the institution extending over fifty-nine years, was made the occasion of a complimentary dinner to him on the 21st instant by the medical officers, past and present, of the hospital. The dinner was given in the medical library on the second floor of the hospital, covers being laid for ninety guests. The board of managers of the hospital was present, as well as the medical staff and some invited guests. There was an unexpectedly large gathering of former resident physicians. The event was altogether one of great interest, and was thoroughly enjoyed. The large and distinguished attendance upon such an occasion testified to the respect and high esteem in which Mr. Malin was held by those who had been brought in contact with him in the discharge of their daily duties. A pleasant feature of the occasion was the presentation by the assembled guests of a portrait in oil of Mr. Malin to the trustees of the hospital. A portrait of Dr. John Conrad, contributed by some of the members of the medical staff, was also formally presented.

THE PHILADELPHIA POLYCLINIC AND POST-GRADUATE SCHOOL has secured a building for the institution, located opposite the College of Physicians, on the southeast corner of Thirteenth and Locust Streets. Alterations will be made during the spring and summer so as to open early in the fall.

DR. ROBERT H. ALISON has been appointed Health Officer of the port of Philadelphia by Governor Pattison, and unanimously confirmed by the Senate.

MARK TWAIN says there is something very fascinating about science, it gives you such wholesale returns of conjecture for such trifling investments of fact.

NOTES AND QUERIES.

NOTICE.

AN ARMY MEDICAL BOARD has been ordered to assemble at the Army Building, corner of Houston and Greene Streets, New York City, New York, March 1, 1883, for the examination of such persons as may be properly invited to present themselves before it as candidates for appointment in the Medical Corps of the Army, and will probably continue in session about three months.

All candidates for appointment in the Medical Corps must apply to the Secretary of War for an invitation to appear for examination. The application must be in the handwriting of the applicant, must state date and place of his birth and place and State of which he is a permanent resident, and must be accompanied by certificates based on personal acquaintance from at least two persons of repute as to citizenship, character, and moral habits. Testimonials as to professional standing from professors of the medical college at which they graduated should also accompany the application, if they can be obtained. The candidate must be between 21 and 28 years of age (without any exceptions), and a graduate of a regular medical college, evidence of which—his diploma—must be submitted to the Board.

Further information regarding these examinations and the nature thereof can be obtained by addressing the Surgeon-General, U. S. Army, Washington, D.C.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY FROM FEBRUARY 3, 1883, TO FEBRUARY 17, 1883.

NEWTON, R. C., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Is relieved from duty at Fort Cummings, N.M., and will proceed to Fort Sill, I.T., and report to the commanding officer for duty. S. O. 28, Department of the Missouri, February 5, 1883.

BROWN, JOSEPH B., LIEUTENANT-COLONEL AND SURGEON.—Detailed as member of board for examination of assistant-surgeons for promotion and candidates for admission into the Medical Corps U. S. Army, to convene at New York City on March 1, 1883. Paragraph 1, S. O. 35, A. G. O., February 10, 1883.

CLEMENTS, BENNETT A., MAJOR AND SURGEON.—Detailed as member of board for examination of assistant-surgeons for promotion and candidates for admission into the Medical Corps U. S. Army, to convene at New York City on March 1, 1883. Paragraph 1, S. O. 35, A. G. O., February 10, 1883.

JANEWAY, JOHN H., MAJOR AND SURGEON.—Detailed as member of board for examination of assistant-surgeons for promotion and candidates for admission into the Medical Corps U. S. Army, to convene at New York City on March 1, 1883. Paragraph 1, S. O. 35, A. G. O., February 10, 1883.

WOODWARD, J. J., MAJOR AND SURGEON.—The extension of leave of absence on account of sickness, granted October 6, 1882, is further extended six months on account of sickness. Paragraph 9, S. O. 34, A. G. O., February 9, 1883.

TOWN, FRANCIS L., MAJOR AND SURGEON.—Is relieved from duty at Fort Walla Walla, and will report to the commanding officer, Vancouver Barracks, for duty as post-surgeon. S. O. 7, Department of the Columbia, January 27, 1883.

DE LOFFRE, AUGUSTUS A., CAPTAIN AND ASSISTANT-SURGEON.—Will be relieved from duty in the Department of the Missouri, and report in person to the commanding general, Department of the East, for assignment to duty. Paragraph 3, S. O. 26, A. G. O., January 31, 1883.

DE LOFFRE, AUGUSTUS A., CAPTAIN AND ASSISTANT-SURGEON.—Relieved from further duty in this department. S O. 28, Department of the Missouri, February 5, 1883.

ELBREY, FREDERICK W., CAPTAIN AND ASSISTANT-SURGEON.—The leave of absence on surgeon's certificate of disability, granted July 21, 1882, is extended six months. Paragraph 5, S. O. 26, A. G. O., January 31, 1883.

TAYLOR, B. D., CAPTAIN AND ASSISTANT-SURGEON.—Granted leave of absence for one month on surgeon's certificate of disability. Paragraph 2, S. O. 13, Department of Texas, February 1, 1883.

TAYLOR, MARCUS E., CAPTAIN AND ASSISTANT-SURGEON.—So much of S. O. 20, A. G. O., January 24, 1883, as directs him to report in person to the commanding general, Department of the East, is amended to direct him to report in person to the commanding officer, David's Island, New York Harbor, for duty at that station. Paragraph 2, S. O. 33, A. G. O., February 8, 1883.

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PHILADELPHIA, MARCH 10, 1883.

ORIGINAL LECTURES.

CLINICAL LECTURE

ON SCIATICA: WITH REMARKS UPON ITS ETIOLOGY AND TREATMENT.

Delivered at the Hospital of the University of Pennsylvania, November 11, 1882,

BY WILLIAM PEPPER, M.D., LL.D.,
Professor of Clinical Medicine in the University of Pennsylvania.

Reported by WILLIAM H. MORRISON, M.D.

GENTLEMEN,—Our first patient is suffering from the painful affection sciatica. He is a big, burly fellow, a car-driver by occupation. He has always enjoyed good health, but has been a good deal exposed to the weather, working from 4.30 A.M. until 11 P.M. and getting only about four hours' sleep. This he has kept up for thirteen years. His occupation requires him to go along the river front; but he has never suffered from malarial trouble.

Last Tuesday, four days ago, after no unusual exposure, he began to have pains in the groin, extending towards the knee, and pains down the back of the thigh. The pains were, therefore, along the lines of the anterior crural nerve in front and the sciatic nerve behind. The suffering is most marked at nights, beginning about 8 P.M. and subsiding at 6 A.M. He has noticed this every night. Making any movement that disturbs the hip-joint causes severe pain.

The symptoms of sciatica in its acute form are so characteristic that there is no danger of its being overlooked. In chronic sciatica, however, we have to consider carefully whether we have to deal with pure sciatica, or whether we have pain in the course of the sciatic nerve as one of the symptoms of some deep-seated trouble. In the first place, it is important to distinguish between those attacks which are palpably acute and those which are more or less chronic and in which the symptom of sciatica may be only one of several morbid conditions present. In aneurism of the aorta low down the tumor may press upon the nerves of one side, causing pain in the course of the circumflex, the genito-crural, the ilio-inguinal, or the sciatic nerve. Under such circumstances there may be sciatica as one of the symptoms of a deep-seated abdominal disorder. The same thing is true in some cases of leucæmia where the abdominal glands are first involved. I have seen on several occasions the first symptoms in lymphatic leucæmia resemble those of lumbago or sciatica, and the real condition has not been recognized until the progressive failure of health and strength, the increasing anæmia, the continuous enlargement of the lymphatic glands, or the examination of the blood, has revealed the nature of the disease. In any case of chronic sciatica it is necessary to consider all sources of pressure on the nerve, and until this has been done it is not safe to say that the neuralgia is due simply to an affection of the sciatic nerve. In an acute attack like the one which this man has, we are spared all anxiety as regards this point. We at once recognize that it is a case of simple sciatica, involving the nerve-trunk; but this knowledge is not sufficient to enable us to treat the case intelligently.

The causes of sciatica are numerous. Let me mention a few of them. Malaria not rarely reveals itself by some local neuralgia. The most common form is perhaps ordinary trifacial neuralgia, but there may be from this cause neuralgia of the brachial plexus, and frequently one of the sciatic nerves is involved. I have seen cases in which there was no chill, scarcely any fever, but severe periodic sciatica, which rapidly yielded to quinia. You are not to suppose, however, that because a neuralgia exhibits a marked periodicity it is malarial in its origin, for frequently neuralgic conditions resulting from the most diverse causes exhibit a marked periodicity,—*i.e.*, tending to recur at the same hour on succeeding days. Although this man has been exposed to the malarial poison along the river edge in the early mornings and evenings, and although his neuralgia exhibits periodical exacerbations, we are not to assume at once that it is of malarial origin.

In this connection I shall call attention to the presence or absence of pain over the point of emergence of the nerve as a means of some value in the differential diagnosis. In all neuralgias painful spots are found over the points of exit of the nerve affected. In sciatica it is where the nerve passes through the sacro-sciatic foramen.

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In the purely malarial affection it has seemed to me that the local tenderness is less marked than it is when the neuralgia is dependent upon a definite lesion of the nerve-sheath and trunk, so that excessive tenderness over the point of emergence and excessive pain on motion constitute to my mind evidence against the purely malarial origin of a periodic neuralgia. In neuralgia due to malaria the local tenderness in the interval is slight, but during the paroxysm there is undoubtedly a congestion of the nerve-sheath causing local pain and tenderness; but with the disappearance of the congestion these subside, while if the neuralgia is due to some local lesion of the nerve the tenderness is extreme and more or less persistent. In cases where there is doubt as to the cause of the trouble, the use of quinia in full doses is a therapeutic test that should never be neglected.

Again, I have seen several cases of sudden, severe sciatica in workers in lead. We more commonly see abdominal neuralgias from this cause; but lead-poisoning may also cause a neuralgia of peripheral nerve-trunks.

Far more frequently the neuralgia results from some congestion of the nerve-sheath, often associated with a gouty or rheumatic diathesis; and, even though there is no gouty or rheumatic tendency, exposure to damp and cold may cause a sudden congestion of the nerve-sheath, with such pressure upon the nerve-trunk as to give rise to the most intense pain. This condition may affect any peripheral nerve, as the cranial nerves, the branches of the brachial plexus, very frequently the intercostal nerves, and the sciatic nerves. This is the most common cause of acute sciatica. We are to distinguish between rheumatic neuralgia and that due to simple congestion by the history of the case, by the presence or absence of the rheumatic or gouty diathesis in well-marked form, and by the existence or non-existence of symptoms of rheumatism or gout in other parts of the body.

Neuralgia from any of these causes may pass into the chronic form, and thus the most usual causes of chronic neuralgia are malaria, some toxic influence, or a subacute inflammation beginning as an acute attack and running into a subacute or chronic form, with persistent thickening of the nerve-sheath and constant pressure upon the nerve-trunk.

In addition, sciatica may be an expression of the neuralgic constitution. This is associated with a special condition of system, and is found in anæmic individuals of morbidly sensitive natures. It is in such cases that we see neuralgia in its most protean form. These cases are usually recognized with ease.

In the present case the diagnosis is between malarial neuralgia and simple perineuritis of the sciatic nerve. The fact that this man has never had malaria, the fact that there is intense tenderness over the point of emergence of the nerve, and the fact that this persists during the intervals between the spells of pain, render it probable that this sciatica is due to simple congestion.

Sciatica gives rise to very severe pain whenever such motions are made as disturb the relation of the sciatic nerve to the opening through which it passes. The patient may walk pretty well as long as he keeps the leg stiff, but the moment he makes the slightest motion which disturbs the relation of the nerve at its point of exit he is seized with a violent paroxysm of pain. The pain is usually referred to a point between the trochanter and the tuber ischii, thence it extends along the course of the nerve. If the lesser sciatic is alone involved, the pain does not go below the knee, but when the main sciatic nerve is affected, the pain may extend into the calf of the leg and into the foot and radiate through the various branches of the nerve. The pain is often associated with a feeling of fulness, weight, and tingling. There may be at the same time a painful condition of other nerves. In this man there seems to be involvement of the anterior crural nerve.

In all cases of neuralgia there is this tendency to periodicity, the pain being more severe at one period than at others, and sometimes entirely disappearing. The spells of pain more frequently occur during the night, but they may occur during the day. If this neuralgia were purely malarial, it is probable that the paroxysm of pain would come on at the time that a chill usually appears,—that is, in the early part of the day.

The treatment is based upon a careful study of the causal condition. I shall treat this man in the following manner. The pain is so severe that I shall have injected, morning and evening, into the deep tissues

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of the thigh a solution of morphia and atropia:

Morphiæ sulph., gr. $\frac{1}{8}$;
Atropiæ sulph., gr. $\frac{1}{60}$.

When thrown deeply into the tissues the injection does much more good than when simply placed beneath the skin. The puncture itself is useful. The mere penetration of the tissues with a needle unquestionably does good; still more benefit is obtained when the puncture is followed by an injection of simple water; but of course the best result is derived from the injection of a solution containing a suitable anodyne.

It is an old observation that puncturing the tissues over a painful nerve would relieve the pain. The practice of acupuncture, by plunging solid needles into the tissues, for the relief of neuralgia, dates back thousands of years in the Chinese practice of medicine. In China there is a caste or class of people whose business it is to practise acupuncture. The needles which they use for the treatment of sciatica are very long, made of fine gold, brought to an exquisite point, sometimes worked with a fine spiral and sometimes perfectly smooth. These are rapidly rotated between the thumb and index-finger and inserted to a great depth. It has been supposed that the relief afforded is due to puncture of the nerve-sheath, allowing the escape of some exudation which causes pressure upon the nerve. I do not think, however, that this is at all probable, for the anatomical knowledge of those who practise this treatment is very slight, and even if they succeeded in reaching the nerve-sheath the needle would probably be introduced too far and injure the nerve itself; and, again, the opening would be so small and the tissues are so elastic that very little fluid could escape.

Some attribute the good effects of puncture to the influence of the mind over the body, while others think it due to reflex action on the vaso-motor nerves. I do not care to spend time to-day in considering the correctness of these explanations; but the fact that mere puncture does good in neuralgia is undoubted.

Let me here say that, while I confidently recommend hypodermic injections of morphia, I earnestly protest against their use in chronic neuralgia. In no other disease will you find the opium habit more readily contracted than in chronic neuralgia. The attacks come on so frequently and so violently that the patient soon becomes the victim of this most troublesome habit. In such cases I should far rather resort to some other means of relieving the pain than injections of morphia. In this instance I have no hesitation in employing morphia, for the necessity for its use will pass away in a few days.

We should by all means use some form of counter-irritation over the affected nerve. I shall first use a blister; but if the case proves obstinate the actual cautery should be resorted to. I shall apply a blister three inches by four inches.

Internally I shall, for two or three days, give him thirty grains of quinia a day. I do not give it with the idea that it is going to cure the neuralgia, but because his history justifies a suspicion of malarial poisoning, and, even if there is no malarial element, the effect of the quinia upon the vessels of the affected part and its influence upon the general nervous system cannot fail to be of benefit. After a few days the dose of quinia will be diminished and arsenious acid be associated with it. When the injections are stopped I shall also give him belladonna and iron. I shall immediately put him on iodide of potassium, five grains four times a day.

This will constitute the treatment, and by the middle of next week the man will probably be able to return to his work.

ORIGINAL COMMUNICATIONS.

IS CRANIOTOMY JUSTIFIABLE?

Read before the Philadelphia County Medical Society, February 14, 1883,

BY E. E. MONTGOMERY, M.D.,

Obstetrician to the Philadelphia Hospital.

As we survey the history of obstetrics, we are impressed with the fact that in the earlier days of the art some sage enunciated and impressed upon his followers the formula, "Meddlesome midwifery is bad." This axiom, like "the little leaven that leaveneth the whole lump," has been the pervading principle from that day to this.

It has been the spectre that has constantly stood in the way of progress, and, like Banquo's ghost, would not down.

Every step towards obtaining greater

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safety for both mother and child has been in direct violation of this principle, and we do not hesitate to declare that to its influence upon the teaching of the present century is due the existence of the practice of craniotomy upon the living fœtus as an elective operation.

Craniotomy can, before all other obstetric operations, plead antiquity in justification of its practice. It was evidently known at the time of Hippocrates, as he mentions a method of delivery of the head by hooks. A similar method is described by Celsus.

The Arabian physicians not only employed perforators upon the head, but were familiar with the use of instruments for compressing and extracting it. Indeed, before the introduction of forceps, where turning was impracticable or had failed, this was the only method of delivery. The hook and perforator were probably the first obstetrical instruments devised.

The value of the operation is variously estimated in different countries and by different obstetricians.

According to Churchill, it was performed by the British in the proportion one in two hundred and one and three-fourths cases of labor; by the French, one in twelve hundred and five and two-thirds; and by the Germans, one in nineteen hundred and forty-four and one-third; Dr. Collins, one in one hundred and forty-one; Baudelocque, one in two thousand eight hundred and ninety-eight; and Siebold, of Berlin, one in two thousand and ninety-three. In the absence of any statistics, it is impossible to estimate the frequency of its performance in this country, though we do not perform it with anything like the frequency of the British. In consideration of the certain mortality to children and frequently fatal results in mothers, it is a subject worthy of the highest and most serious consideration.

Barnes gives the following indications for its performance:

1st. Such contraction of pelvis, or soft parts, as will not give passage to a live child, and where forceps and turning are of no avail. These may be due to distortion of the pelvis, which is most frequent at the brim; to tumors—bony, malignant, or ovarian—encroaching upon the pelvic cavity; to growths, fibroid or malignant, in the walls of the uterus; to cicatricial atresia of the vagina or cervix; to extreme spastic contraction of the uterus upon the child, forbidding forceps or turning; where obstruction in pelvic contraction ranges from 3.25″ max. to 1.50″ min.

2d. Cases where obstruction is due to the child, as face-presentations, locked twins, hydrocephalic head.

3d. Conditions of danger to the woman, rendering it expedient to deliver as speedily as possible. Some cases of rupture, convulsions, hemorrhage, or great exhaustion, where delivery is urgent and cervix undilated.

Of 1000 cases of craniotomy collated by Tyler Smith, 448 were occasioned by contraction of the pelvis. The greater number of British authorities say that Cæsarean section need not be resorted to when the smallest diameter exceeds 1½″. On the continent, however, Cæsarean section is practised from choice if the smallest diameter is from 2″ to 2½″ when the child is alive. Pajot, of Paris, contended for the cephalotribe in a conjugate diameter of 1¾″. Osborne delivered a fœtus successfully through a pelvis which he believed to have measured only ¾″; but we all know how easy it is to make a mistake of ¾″ to 1″ in such approximate estimates, and how difficult it must be even to reach the head through such a pelvis with the finger, let alone the accurate use of instruments.

Greenhalgh says, "Nothing could induce me again, even under the most favorable circumstances, to attempt delivery by the crotchet when the conjugate diameter of the brim does not fully measure 2″, exclusive of the soft parts." Burns appropriately says, "It is one thing to extract, and another to extract safely, in extreme deformity."

It is difficult to arrive at an accurate estimate of the mortality in craniotomy, but according to Churchill and Tyler Smith it is in the proportion of one in five. It is evident, however, that the greater the contraction the more difficult the operation and the more likely to be attended with fatal consequences to the mother. Of seventy cases collected by Parry, in which the conjugate was 2½″ or less, forty-three, or 61.43 per cent., recovered, and twenty-seven, or 38.57 per cent., died.

Hemming has shown that of two hundred upon whom cephalotripsy was performed thirty-nine died, a mortality of 19½ per cent. Jones says that during three years, 1857–59, in the Hôpital Clinique,

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of twenty-four women operated upon seven died, or over 25 per cent. In eight of these the conjugate was less than 2½", five of whom proved fatal. Baudelocque, in 1829, claimed that more than half the women delivered by craniotomy in the previous sixteen and a half years died, and suggested a new cephalotribe.

In one hundred and three craniotomies collected by Rokitansky, forty-one, or about 41 per cent., proved fatal. He says, "In Prof. Braun's clinic a much greater number of unfavorable cases had been treated by the cranioclast than by the cephalotribe, and yet the results of the former instrument were in every respect superior." Hodge says, "If the conjugate be 2" or under, Cæsarean section should be performed, as affording better prospect for the mother." Cazeaux says, "We should prefer Cæsarean section to craniotomy when the conjugate is 2⅛" and the child alive." Hicks and Phillips claim that the mortality of one in five is too large, as deaths are attributed to craniotomy which are due to the condition rendering it necessary, as rupture of the uterus, etc. Harris, on the other hand, objects to cases in which laparotomy is performed for rupture being included in the statistics of Cæsarean section, from the fact that, the operation being done early, they are more favorable.

The dangers of craniotomy, according to Barnes, are,—

1. The perforator has been known to strike the promontory of the sacrum or to lacerate the cervix uteri.

2. Spicula of cranial bones resulting from perforation may scratch or tear the soft parts.

3. The crotchet may slip and lacerate the soft parts.

4. The operation may be deferred too long.

5. Long-continued pressure may cause mortification and sloughing of the mother's soft parts. Of these the first, third, and fourth may be eliminated. No capable operator would thrust the perforator into the sacrum for the child's head; he would also carefully guard the crotchet so that his hand should be wounded rather than the tissues of the woman, and, when satisfied she could not be delivered otherwise, would operate at once. The cause of greatest danger is undoubtedly that of pressure, and this is an important one in small pelves. Upon a careful survey of the subject, we find all authorities agreeing that where the conjugate is less than 1½", Cæsarean section is unavoidable. Parry, in an able paper,* has shown that where the conjugate is less than 2½", Cæsarean section affords better results for the mother. With this the views of Hodge and Cazeaux nearly coincide. As we have, then, but ¾" between 3.25", the maximum diameter at which craniotomy is supposed to be necessary, and 2½", the minimum diameter, in which it is safer for the mother than Cæsarean section, we have certainly reached a period when we are justified in abolishing the murderous operation of craniotomy from the list of elective operations when the fœtus is still alive.

In the early period of obstetrics, when the woman was unable to deliver herself, the only alternative was between Cæsarean section and craniotomy. As these involved the death of either the mother or the child, the latter alternative was always, when practicable, chosen. From this practice was formulated the principle that the life of the mother should always have the precedence: hence it became the rule to sacrifice the child rather than subject the mother to any risk. This was very evidently the practice of the British physicians, where we find craniotomy in the proportion of one in two hundred and one and three-quarters, and the forceps used once in three hundred and sixty-two and three-quarters.

Examining further, we find that those who use the forceps most frequently are those who, as a rule, least often perform craniotomy. Thus, Clark employed forceps in one in seven hundred and twenty-eight; craniotomy in one in two hundred and forty-eight. Collins, forceps in one in six hundred and seventeen; craniotomy in one in one hundred and forty-one. Siebold, of Berlin, forceps in one in seven; craniotomy in one in two thousand and ninety-three.

But is this principle a correct one? Should the mother always be considered first? It has been claimed in favor of this that the mother has her relations in life fixed; she is already endeared to her husband and family, and has a large circle of influence, possibly other children dependent upon her; while, upon the other hand, the embryo is, as Barnes says, a mere

* American Obstetrical Journal for 1875.

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vegetative existence, drawing its life-nourishment from the mother, and with no certainty that it would live a day when this union is severed. Taking this view, it is not surprising that the life of the mother should be considered relatively more valuable. But in deciding this question we should lay aside all feeling and be governed by conscience and reason. We have to do with two human lives, not one, and every principle of law and morals demands of us that we should institute such measures as are most likely to save both.

The physician may be called upon to perform craniotomy a number of times upon the same woman. It has been thus performed as often as a dozen times. Can such a practice be justified? Is it surprising that the renowned Dr. Meigs should have refused to perform craniotomy a third time for Mrs. Reybold? As the result of such refusal, she is to-day, Harris informs us, the possessor of two children and six grandchildren.

Radford says, "The woman is *ipso facto* one party, and, indeed, the chief party, who has brought into existence the innocent being whose life the practitioner is employed to take away. It may be argued, as a plea for her justification, that the wife is subject to her husband; and there can be no doubt that she has engaged to be so in the matrimonial contract, which was mutual. But if it be considered right (which in such a case as this could only be conditionally) strictly to observe this promise, it must be equally imperative upon both parties to obey the law of nature, and fulfil their mutual pledge to procreate (and, without doubt, preserve) the species, both of which vows are broken by the employment of the crotchet." It may be argued that, as she was ignorant of her condition in the first pregnancy, she is entitled to craniotomy, if such give her greater security. But certainly she could not urge this plea in a second pregnancy; she is now acquainted with the fact that an unmutilated infant cannot be born *per vias naturales*, and should afford the fœtus a chance for its life.

The life of the mother is not always of the same value. She may be the victim of some incurable disease, as cancer of the uterus, phthisis, or heart-disease. It certainly should not be considered justifiable to sacrifice the child for the purpose of prolonging the miserable existence of the mother. Of course we do not desire to be understood that the life of the woman should ever be sacrificed for the child; but the attempt should be made to save the lives of both.

Prof. Simpson, of Edinburgh, says, "Formerly medical practitioners seem to have thought little, and medical writers said little, regarding the very repulsive character of the operation of craniotomy when performed, as it frequently was, when the child was still living. Apparently, some obstetric practitioners and writers of the present day continue to look upon the practice of craniotomy as one that should not unfrequently be adopted, and one which it is quite justifiable to adopt. Obstetric reports and collections of cases have been published within the last few years describing craniotomy as performed forty or fifty times, or oftener, by the hand of the same practitioner. But perhaps ere long it will become a question in professional ethics whether a professional man is, under the name of a so-called operation, justified in deliberately destroying the life of a living human being."

The physician should make it a rule to examine, during the last month of pregnancy, every woman who applies to him for attendance in confinement, and thus determine the presentation of the fœtus and the presence of organic impediments to the passage of a mature and full-grown infant, when such exist. At the proper time the woman should be informed of the alternative operations which are suitable to meet the exigencies of her case. If the obstruction is moderate in degree, the forceps, turning, or the induction of premature labor, with or without symphyseotomy, will be proper; but if the distortion is great in degree, then Cæsarean section, laparo-elytrotomy, or hystero-ectotomy may be required.

When we consider the divine possibilities of the fœtus whose life we are called upon to sacrifice, no physician can plunge the perforator into the head, or crush it with the cephalotribe, without earnestly yearning for some more excellent way. Is he who speaks of the unborn child as a mere vegetative existence, unworthy of consideration when its mother's life is in peril, ready to proclaim that the world would have been no poorer had Shakspeare or Milton been the victim of the perforator? And yet the promise and possi-

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bilities of any unborn fœtus are as great as were theirs at the same period of existence.

FORCEPS.

Of the various alternatives for avoiding craniotomy, the first that deserves our attention is the employment of the forceps. They have been called the child's instrument, but may be equally effective for the mother. The past history of the employment of the forceps illustrates well what we have already said of the baneful influence of the axiom "Meddlesome midwifery is bad;" and in no country is this more true than in England, the birthplace of the forceps.

We have already seen that the English apply them in the proportion of one in three hundred and sixty-two. The frequency of craniotomy is in inverse ratio to the frequent use of the forceps. The maternal mortality resulting from their employment is said by Churchill to be in the proportion of one in twenty. This, to us, excessive mortality is explained by the delay in the use of the instruments.

The following state, according to Harper, was formerly described as indicating the necessity for the use of the forceps. The pains must have nearly ceased; vomiting and severe shivering; dry tongue; sordes on the teeth; pulse above 120, weak, and perhaps intermitting; fetid discharge from the vagina; restlessness, and even slight delirium; listlessness and supineness, with a certain amount of careless indifference to anything which may be suggested; and, to complete the picture, some tenderness of the abdomen. Denman recommended that the head of the child shall have rested upon the perineum six hours before the forceps are applied, though the pains should have entirely ceased during that time. Lee, Hunter, and Collins held similar views. Meigs says, "The forceps cannot be applied unless the parts are favorably disposed. For instance, the os uteri must be dilated and gone up over the head." No such delay as this is desirable or consonant with the safety of mother or child. The longer the head remains impacted in the pelvis, the more it becomes swollen, and, by interfering with the circulation in the pelvic tissues, produces turgescence and œdema, increasing the difficulty in delivery. Many of the lesions—as lacerations of cervix, vagina, and perineum, fistulæ, sloughing of vaginal walls, etc.—formerly attributed to the use of the forceps were really the result of long-continued pressure.

The employment of the forceps is without doubt indicated if the ordinary forces are insufficient to overcome the obstacles to delivery, where the conjugate is not less than 3.25″. As soon as it becomes evident that the mother's forces are insufficient, it is useless to continue the suffering. The early application of the forceps prevents exhaustion and promotes the subsequent recovery.

When applied at the superior strait, it should be done early, while the head is in a favorable position, before the swelling of the soft parts, and to relieve the latter from the effects of continued pressure. Second, because the child is more likely to be alive and live after birth than if subjected a long time to the pressure of the uterine contractions. In this position the forceps are necessarily applied in the occipito-frontal position, instead of upon the sides; consequently they should be used as tractors, with but little compression. The contraction being in the conjugate, any compression would increase the diameter to be presented to it.

Harper applied the forceps two hundred and thirty-two times in private practice, in ninety-nine of which he used the long forceps, without a single maternal death. Radford never had a death after the long forceps. The danger arises not from the application of the instruments, but from the delay in their use.

TURNING.

Where the conjugate is less than 3.25″, or the disproportion between the head and the pelvis is marked, version should be practised, as affording greater safety.

This is the oldest conservative obstetrical operation, being the only alternative to craniotomy previous to the discovery of the forceps, and probably never reached a greater degree of perfection than in the time of Mauriceau, just prior to their introduction. It then fell into disuse until its revival by Sir James Y. Simpson. The mortality is generally estimated as in the proportion of one in sixteen for the mother and one in three for the child. The maternal mortality must be divided between it and the causes indicating it, as rupture of the uterus, placenta prævia, etc. It is especially indicated in transverse presenta-

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tions and in contracted pelves. Simpson pointed out the fact that in flattened pelves, the base of the head being brought into the contracted brim was more readily moulded, and with less danger to the fœtus, than if the vault presented. We have seen already that any pressure of the forceps necessarily increases the biparietal diameter presenting to the narrowed conjugate. This is obviated in version. We have no well-authenticated record of the delivery of a living fœtus by version through a conjugate of less than 2¾″. But even when it measures 3¼″ or 3½″, the result still depends upon the length of the transverse diameter. Where the narrowing also involves the justo-minor pelvis as well, version should not be attempted.

The majority of the profession approach version with timidity and hesitation. For the greater safety of the mother, and especially of the child, it should be done early, before the rupture of the membranes. It may then be performed by the combined method of Hicks, or, if seen sufficiently early in transverse positions, may be accomplished by external manipulation alone.

It cannot be questioned that in many of the cases in which evisceration or decapitation has been performed for impacted shoulder-presentations, the children could have been saved had the condition been discovered prior to the inception of labor, as it would have been were it the rule (as we have suggested) to examine the abdomen of every woman during the last month of pregnancy.

One danger arising from version is that of introducing some septic poison by the hand. This the operator should guard against by washing with a disinfecting solution. The hand should be introduced very carefully, to avoid wounding either the vagina or the uterus; and when the membranes are ruptured and the uterus firmly contracted, the woman should be completely anæsthetized before the procedure is undertaken. After turning, time should be given the uterus to contract upon the receding parts. If the parts be rapidly dragged through, the chin will be tilted upward from the breast of the child, thus presenting an unfavorable relative diameter to the pelvis.

Hurried delivery before the uterus becomes fully dilated is likely to be attended by spasmodic contraction of the os around the neck of the child, often so strong and protracted as to cause its death.

PREMATURE LABOR.

The induction of premature labor is more directly antagonistic to craniotomy than is any other obstetric operation. It was first performed by Macauley in 1756. He was induced to perform it by observing that in cases in which craniotomy had been necessary from distortion, an accidental premature delivery was attended with a living child. It is well known that the fœtus is viable at the seventh month, though children have been known to live when delivered at six and six and a half months.

As the most frequent cause of craniotomy has been seen to be contraction of the pelvis, the operation should be obviated in the great majority of cases by the induction of premature labor. With this object in view, the physician should insist upon an accurate examination at the middle period of pregnancy in any patient in whom there is reason to suspect deformity of the pelvis. If the importance of it is explained to the patient, she will seldom refuse to submit to it. There certainly should be no question as to the advisability of this procedure in a woman who had previously undergone craniotomy. In order to determine the time at which premature labor should be induced, a number of measurements of the size of the fœtal head have been made at different periods of utero-gestation, from which Ritgen has constructed the following table of practical adaptations. He says labor may be induced at the

29th	week, when	ant.-post.	diameter	of	pelvis is	2″ 7‴
30th	"	"	"	"	"	2″ 8‴
31st	"	"	"	"	"	2″ 9‴
35th	"	"	"	"	"	2″ 10‴
36th	"	"	"	"	"	2″ 11‴
37th	"	"	"	"	"	3″ 0‴

It will be seen that there are two measurements of the pelvis limiting the operation. If the pelvis exceed the greater, it is uncalled for, and if less than the smaller, it will not succeed in saving the child. All authorities agree that the smaller of these diameters is about 2½″ and the greater 3¼″. If the conjugate be less than the former, no viable child can pass, while a living child at full term can be propelled through a pelvis measuring 3½″ in the anterior-posterior diameter. Ramsbotham

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performed this operation some sixty times without any apparent unpleasant results upon the mother. For the safety of the child, great care should be exercised to avoid rupturing the membranes. Labor should be induced by hot douches, by separation of the membranes, by the bougie, and by the careful use of Barnes's dilators in the os.

With the knowledge of the chance for life afforded the fœtus by this operation, the repetition of craniotomy upon any woman whose pelvis measures over 2½" in the conjugate should be considered an evidence of neglect and to the discredit of the profession.

The procedure is equally applicable to cases in which the obstruction is due to the presence of tumors or atresia of the vagina. It may be combined with version or the use of the forceps.

ABORTION.

The advisability of abortion has been suggested in order to obviate the dangers and necessity of Cæsarean section. If the operation were ever justifiable, it would be in a first pregnancy, when it was discovered early that the pelvis was small; but we must confess to sharing in Radford's scruples to performing it a second time or a number of times upon the same individual. Aside from the moral stand-point, there is an objection, in the cases to which it would be applicable, in the inability to deliver the placenta if retained after abortion has been produced.

Symphyseotomy, proposed by Sigault in 1769, and practised for some time with disastrous results, has again been revived in Italy, and seems destined to become an important factor in the delivery of women with contracted pelves. In fifty cases with which Dr. Harris* presents us, forty women and forty-one children were saved in women with pelves varying between 2⅜" and 3⅛". As these were cases in which craniotomy had before been thought necessary, the value of the procedure is self-evident. In these cases version was not practised, except where there was transverse presentation, but labor was allowed to proceed normally. Forceps were used in about one-fourth the cases.

We can imagine that with the aid of this procedure we should be able to deliver viable children through a smaller pelvis than 2½" in the conjugate.

CÆSAREAN SECTION.

There still remains a class of cases who cannot be delivered by any of the above-mentioned methods, upon whom Cæsarean section must be performed. The British authorities, from their unfortunate experience with this operation, have endeavored, as far as possible, to abolish it from the list of operations, and consequently recommend craniotomy in pelves with the conjugate 1½", or even less. Their disastrous results can be explained, however, when we consider that, from the objection to its performance, it is postponed until the woman is exhausted and her vital forces are no longer sufficient to rally from the shock of any operative interference. The researches of Harris have shown that in twenty-seven cases where the operation was done early, during the first twenty-four hours of labor, twenty women, or 74$\frac{2}{27}$ per cent., were saved, and twenty-two children, or 81$\frac{1}{2}\frac{1}{7}$ per cent., rescued alive, four of whom died during the following week. Dufrillay has shown that in timely operations, 81 per cent. of mothers are saved. This at first may seem too favorable a result, but it is not any better than ovariotomy; and why should a Cæsarean section be more fatal than an ovariotomy? If the physician has determined in a case (as he should be able to do) that the living child cannot be delivered *per vias naturales*, he should proceed without delay to Cæsarean section. Every hour of delay increases the peril of mother and child. The operation should, of course, be done with antiseptic precautions. Had such a course been the rule, instead of the timidity and hesitation that have characterized obstetrics in the last century even, the results of Cæsarean section would have been more brilliant, if possible, than those of ovariotomy. Were such the practice, the craniotomist would stand on the same level as the abortionist.

The success of abdominal incision for the removal of a fœtus which has escaped from the uterus through rupture has been so much greater than Cæsarean section that Harris has objected to having the results of such cases included in the statistics of the latter operation. Yet we have an irregular wound in the uterine walls, instead of an incised one. The favorable results in

* American Journal of the Med. Sciences, January, 1883.

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these cases are due simply to the fact that the attendant no longer has an excuse for temporizing, and an operation is done while the woman is in possession of her vitality. These results should teach us the importance of early action.

The opinion of the majority of authorities is opposed to the administration of anæsthetics for the performance of this operation, as they have a decided tendency to relax the uterine contractions and increase the tendency to hemorrhage. The necessity for their use, and all pain, can, however, be obviated by an ether spray upon the surface before incision.

LAPARO-ELYTROTOMY.

Thomas, in order to obviate the dangers of the peritoneal and uterine incision in Cæsarean section, revived the operation of laparo-elytrotomy, which consists in making an incision parallel to Poupart's ligament from the anterior superior spine of the ilium to the spine of the pubes, down to the peritoneum, pushing it off, tearing into the vagina, and delivering through the os. It may be done upon either side, though preferably upon the right. It is subject to the following objections. 1. The os must be dilated or dilatable. 2. The firm adhesion of the peritoneum resulting from the wound would preclude a second operation upon the same side, and the contractions of the vaginal canal would render it difficult even upon the opposite side. 3. The danger of wounding the bladder. Notwithstanding these objections, this procedure should be the elective operation over Cæsarean section where the os is well dilated and the woman is exhausted by long-continued efforts to deliver herself, as these are the cases that bear the latter operation poorly.

Porro's operation consists in the ablation of the uterus and ovaries after removal of the fœtus. This operation has been attended by gratifying success in the Italian and German hospitals, where the Cæsarean operation was almost invariably fatal. This operation has been opposed because it unsexes the woman and destroys her reproductive powers. But of what value are her reproductive organs, if it be deemed necessary that the fruit of the womb shall constantly be destroyed upon maturity, and that, too, at the risk of her own life? Better, far better, from every point of view, that she be placed sexually at rest.

Although this operation should be done early to insure the best results, yet it is quite probable that it would afford the woman greater safety than Cæsarean section where the labor has been long and tedious and the uterus exhausted and relaxed by its strenuous and unavailing efforts to extrude its contents.

We do not question the advisability of craniotomy where the fœtus is certainly dead; but even then, when delivery can be accomplished by the forceps or version, they should be preferred for the mental effect upon the woman.

Upon the living child our researches lead us to the following conclusions. Craniotomy is unjustifiable, as, 1st, it considers only the life of the mother, and destroys that of the child, while it is our duty to endeavor to save both. 2d. In pelves with a conjugate diameter greater than 2½" we have other alternatives equally safe for the mother, which afford the child a chance for life. These alternatives we would suggest in the following order. Where the conjugate measures 3.25" or over, the forceps; 2.75" or over, version; 2⅜" or over, symphyseotomy, followed, if necessary, by the forceps. In all subsequent pregnancies, and in the first, when distortion is discovered sufficiently early, premature labor should be induced. 3d. In pelves measuring less than 2½", Cæsarean section affords better results for the mother, and should be done whether the child be living or dead.

In a limited number of cases (where the os is dilated) laparo-elytrotomy may be preferred to Cæsarean section. In all cases requiring it, operative interference should be early. The obstetrician should control events, not be controlled by them.

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NOTES ON THE BLOOD-CHANGES IN ERYSIPELAS.

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THE following notes on the blood-changes in erysipelas are founded upon the observation of some thirty cases of the disease, in most of which the condition of the urine and the temperature of the body were examined, as well as the microscopic appearances of the blood. Be-

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sides these cases, thirty-one cases more were seen, in which the temperature, and frequently the condition of the urine alone, was examined. Some twenty-eight of these sixty-one cases were seen in the erysipelas wards of the London Hospital, Whitechapel, London, during the summers of 1880 and 1882, the remainder mostly in the erysipelas wards of the Philadelphia Hospital, Philadelphia, Pennsylvania, during the winter of 1880–81.

A portion of these notes were included in an inaugural thesis (University of Pennsylvania, 1881), from which a short abstract, with comments, has been made by Dr. A. Stillé in his article on "Erysipelas" in Ashhurst's "International Encyclopædia of Surgery."

The writer is fully aware of the incompleteness of these notes, but, as his removal to a country where the disease is seldom seen has put a stop to his further investigation of the subject, he is obliged to present it in its present form.

The plan adopted was to examine with high magnifying powers (one-fifth to one-twelfth inch objectives) freshly-drawn specimens of the blood of patients suffering from erysipelas, and in comparison with healthy blood obtained at the same time, noting the rapidity of the post-mortem changes, as well as abnormalities in the proportion or appearance of the elements themselves. The presence of foreign organisms in the blood was also diligently sought for, at the same time care being taken to prevent the introduction of any such organisms during the process of abstraction and examination.

From time to time dried specimens were prepared and preserved for future reference. The temperature of the patient at the time of abstraction of the specimen was usually noted, and in many cases a quantitative and microscopic examination of the urine was made. In some cases these observations covered only one or two days of the course of the disease, whilst in others they extended throughout the whole, numbering in one instance fifteen. The examination of each specimen lasted from a few minutes to as many hours, and numerous drawings were made of the conditions observed. Several attempts were made to inoculate rabbits, and a few experiments were made upon specimens of healthy and the diseased blood with dilute solutions of certain drugs.

The red corpuscles in a number of cases were noticed to be of less average diameter than in health, and measurements showed this average to be at times more than one-tenth less than that of the red corpuscles of normal blood. This condition was more noticeable at the height or during the early part of the decline of the disease than in its first stages, and is not characteristic of erysipelas alone, as Manasseïn* states, from over forty thousand measurements made in one hundred and seventy-four animals, that septicæmic poisoning, and probably also traumatic fever, causes a reduction in the size of the red corpuscles, and that the same result is caused by increased temperature and sojourn of the animal in a space surcharged with carbonic acid gas, and that the means which reduced the temperature of the animal brought about an increase in the size of the corpuscles. According to Vanlair and Masius,† this diminution in the diameter of the red corpuscles occurs also in microcythæmia.

In cases in which the temperature was high and the inflammation of the parts extensive, the red corpuscles exhibited a marked tendency to adhere to one another in masses, and not in well-formed rouleaux. In many such cases the corpuscles seemed to have lost, in a great measure, their natural elasticity, and had become so softened as to permit of being drawn out into spindle shape or filamentous form by the application of but the slightest force. This condition became very marked at times when the corpuscles seemed to have almost entirely lost their definition and looked like streams of yellow fluid crossing the field of the microscope. Decolorization as well as crenation of the corpuscles generally took place rapidly.

Moxon and Goodhart‡ mention this tendency of the red corpuscles to adhere to one another, and the absence of well-formed rouleaux, as occurring in a case of typhus fever, but do not mention having seen it in any of the score or more of observations made of blood in erysipelas and other diseases. I have myself examined also a few cases of pneumonia, typhoid, and typhus, but have only met with this condition of the blood in typhus, in which,

* Med. Centralbl., 1871, No. 44. Wagner's Gen. Path., Am. ed., p. 518.
† Bull. de l'Acad. Royale de Méd. de Belgique, 1871.
‡ Guy's Hospital Reports, 3d ser., vol. xx., 1875, p. 240.

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however, there was no increase in the proportion of the white corpuscles,—a fact noted in the article on typhus in Reynolds's "System of Medicine."

Hirschfeld* states that there is also an incomplete formation of rouleaux in pyæmia.

In most cases of erysipelas the proportion of the white corpuscles was found to be increased, averaging as high as one to thirty of the red in one case, and one to fifteen in another. In each of these cases the temperature of the patient ranged between 100° and 104°, the proportion of the white corpuscles varying from day to day.

The diameter of the white corpuscles in several cases was considerably less than in normal blood, and in one case was hardly greater than that of the red. The white corpuscles did not exhibit any tendency to adhere to one another, but were occasionally seen adhering to the red.

Moxon and Goodhart† found in the blood of several persons affected with traumatic erysipelas an increase in the proportion of the white corpuscles, but in others this condition did not exist. Dr. H. Vandyke Carter, in his work on spirillum fever,‡ mentions that, following the height of the pyrexia in that disease, leucocytes appear in increased numbers; various degrees of leucocythæmia have also been observed in certain other diseases.§

In nearly every specimen of erysipelatous blood examined, numbers of small, round, highly-refractive bodies, of slightly reddish hue, were observed. These bodies were of varying diameter, averaging about .002–.003 mm. The smaller ones were invariably globular, and were noticed in larger numbers after the height of the febrile attack, increasing as the white corpuscles became less and less abundant, until convalescence was established, when they were only occasionally seen. These corpuscles were sometimes seen adhering to one another, but rarely to either the white or the red. If a small bubble of air were allowed to penetrate a specimen under a cover-glass, not unfrequently would these bodies alone be seen gathered along its edges. These globules were at first thought to be the so-called elementary corpuscles of Zimmermann, and are somewhat similar in description to the hæmatoblasts of Hayem.‖ Lemner also describes a red granular corpuscle (*rothe körnerkugel*) occurring in normal blood.¶

While Vanlair and Masius** have observed small bodies occurring in microcythæmia similar to those already described as occurring in erysipelas, and which they describe as not exceeding .003–.004 mm. in diameter, brightly shining, of the same (or even deeper) color as the red corpuscles, their surface is smooth, and they do not aggregate; and further it is stated that at first when observed they were equal in number to the red corpuscles, but increased to fifty and one hundred to one red; and as the patient became convalescent the microcytes disappeared. Dr. J. H. Kidder, U.S.N., in a "Note on the Microscopic Appearances of the Blood in Scarlatina and Typhoid Fever,"†† mentions having seen similar globules occurring in the blood in scarlatina. It seems, however, from Dr. Kidder's micro-photographs and the accompanying description, that these globules found in scarlatina are somewhat smaller than those of erysipelatous blood, although otherwise closely resembling them. Gamgee‡‡ states that similar globules have been met with in pernicious anæmia, which are described as being much smaller than normal-colored corpuscles, having a diameter varying between 3 μ and 3.5° or 4 μ; they are not bi-concave, but globular, and are of a deeper red color than normal blood-corpuscles. In one case these corpuscles are said to have been present in the ratio of one to five of the normal corpuscles.

Micrococci were noticed in numbers in only five cases, all of which were severe. The first was a case of relapse following an attack of facial erysipelas, in which both eyes were almost completely closed, and the parotid gland on one side and the lymphatics of the neck were more or less involved. There was also delirium. The urine of this patient decomposed very rap-

* Arch. d. Heilk., 1873, xiv. p. 193. Wagner's Path., p. 602.
† Quoted by Stillé in Ashhurst's Internat. Encyc. of Surgery.
‡ Review, Lancet, October 21, 1882, p. 668.
§ See J. T. R. Davison on Pathology of the Blood in Inflammation, Lancet, vol. i. No. xxv., 1882, p. 1028, and vol. ii. No. xxi., 1882, p. 884.
‖ Recherches sur l'Anatomie normale et pathologique du Sang, Paris, 1878, p. 108.
¶ Alex. Schmidt, Pt. 2 Pflüger's Archiv f. d. ges. Physiol., vol. xi., 1875, p. 560.
** Wagner, Gen. Path., p. 518.
†† U. S. Surgeon-General's Office, Washington, 1881.
‡‡ Animal Chemistry, vol. i. p. 155.

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idly and was loaded with bacteria. The second was a case of gangrenous erysipelas attacking the right lower extremity, and ended fatally. In the discharge from the leg large numbers of bacteria were detected. In the third case the whole leg and thigh were involved. This case also ended fatally. The fourth case was that of a negro, in whom the disease exhibited itself in the arm and shoulder, from which later on an incision gave outlet to a large quantity of pus. In the fifth, the least severe of the number, bullæ formed on the face. In only one case were active organisms observed, the specimen examined having been taken from the affected part only half an hour before death, and at a time when the limb was infiltrated with pus. It was observed in these cases that active bacteria developed with considerable rapidity in the diseased blood kept in capillary tubes, even when it had been exposed to the air for but a few seconds during the process of abstraction.

In one instance, beautiful blood-crystals developed in a clot taken from the bulb of a capillary tube within three hours after its withdrawal from the circulation. Wagner* mentions that in the blood of the dead from leucocythæmia there have been found at times colorless elongated octahedral crystals, probably derived from an albuminoid body.

A specimen of erysipelatous blood from one of these same cases was preserved in a capillary tube for eighteen months, at the end of which time it was carefully opened in some sterilized gelatin, and four days later, on examination, bacteria were observed in the gelatin. Unfortunately, however, the accidental cracking of the tube containing the sterilized substance rendered the result of the experiment somewhat unreliable.

Various attempts to reproduce the disease in a young healthy rabbit by inoculation of blood and urine from patients suffering from erysipelas were made on several occasions, but without success. In one experiment, ten drops of bloody serum drawn from the unaffected arm of a negro, suffering from a severe attack of erysipelas in the other arm and shoulder, were injected under the skin of a rabbit, the normal temperature of the animal having first been ascertained to be 100.8°, and the number of red and white corpuscles to the cm. to be 4,500,000 and 15,000, respectively. The temperature of the negro at the time of the abstraction of the blood was 103°, and he had had a severe chill on the night previous; but the temperature of the rabbit was only increased to 101.4° by the inoculation, and fell to 100.2° the next morning, from which it continued to vary but a fraction of a degree during the remainder of the time observed.

The proportion of the red and white corpuscles apparently remained unaltered, and the microscope revealed no other abnormality in the appearance of the corpuscles in the specimens of its blood examined on the same or following days. For a day or two the rabbit seemed ill, but soon recovered entirely. Ten days later, another attempt at inoculation was made, when fifteen drops of urine from a patient suffering from a severe attack of facial erysipelas were similarly injected. This urine was loaded with bacteria of several varieties; yet no ill effects followed its injection, and the blood continued to present a normal appearance under the microscope.

That foreign organisms exist in the secretions of erysipelatous wounds, as well as in tissues affected by erysipelatous inflammations, has been already demonstrated by Heuter, Orth, Koch, Tillmans, Fehleison, and others; but that they exist to any extent in the circulating blood in erysipelas does not, so far as I have been able to ascertain, seem to have been proved. M. Béchamp mentions their physiological presence in normal blood,—not, however, in any considerable number.† I have seen a fine micro-photograph,‡ after Koch, from erysipelatous skin, showing the micrococci *in situ*, and recently Fehleison§ has found micrococci to be constantly present in the lymphatic vessels of the skin in parts invaded by the inflammation. Moxon and Goodhart mention that they observed "beaded strings" in several specimens, but that these were not constantly present in all specimens of the blood in erysipelas examined. The observations made in connection with the preparation of this paper rather point to

* Gen. Path., p. 546.

† Philadelphia Medical Times, October 21, 1882, p. 51.
‡ Exhibited by Mr. W. W. Chene, of King's College Hospital, at a recent meeting of the Medico-Chirurgical Society, London, 1882.
§ Lancet, November 4, 1882, p. 771.

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the rare occurrence in the blood of any considerable number of micrococci or other foreign organisms, except, as already stated, in very severe cases, when an absorption of pus had probably already taken place.

The results of the few attempts to inoculate the disease by hypodermic injections of blood and urine from patients affected with erysipelas, although negative, are recorded, as showing that in some cases at least inoculations may fail to induce the disease in the rabbit. This seems to have been the case in the majority of Tillmans's Leipsic experiments on rabbits (quoted by Stillé in "Ashhurst's International Encyclopædia of Surgery"), when out of twenty-five inoculations only five were successful, although the liquid inoculated contained bacteria in every case. Orth says that bacteria are not found abundantly in the blood of the infected animals.* Orth concludes that the secretions are capable of producing erysipelas by inoculation; that bacteria are generated *pari passu* with the development of the disease; that bacteria stand only ultimately related to the septic cause of erysipelas; that they may be removed from the infecting liquid without destroying its activity, and that it is probable in the different forms of the disease that different micro-organisms occur, although no proof of this latter proposition exists. (Stillé.) Fehleison,† in endeavoring to ascertain whether the micrococci he found in the lymphatic vessels of the skin in the parts invaded by the inflammation could be considered as the vehicles or cause of the infection, succeeded in producing an erysipelas with characteristic pyrexia in a woman æt. 58, suffering at the time from multiple fibro-sarcomata of the skin, by inoculations of cultivated micrococci of the fourth generation from these organisms taken from the inflamed lymphatics.

In the larger number of specimens examined by myself, fine granules were seen, both free and in masses, but were only in a few cases in excess of those seen in normal blood.

The rapid formation of a net-work of fibrin under the cover-glass was a noticeable feature in nearly all specimens of erysipelatous blood. The bands of fibrin appeared generally to start from granules or granular masses. Gamgee‡ states that the blood in erysipelas, as in all diseases where an acute inflammatory process involves an organ of any magnitude, yields much fibrin. Dr. J. F. R. Davison§ mentions that he has found certain fibrin-forming cells (undeveloped red corpuscles?—Norris) numerous in diseases in which serous or purulent exudations exist.

Finally, a few experiments were made to note the effect of weak solutions of the tincture of the chloride of iron upon specimens of normal and diseased blood. It was found that a mixture of the proportion of one drop of the tincture to the ounce of a 1070 sp. gr. salt-water solution, added to specimens of blood of double the bulk, materially affected the behavior of the red corpuscles, which in the case of healthy blood became somewhat hardened and contracted, rebounding, as if hard and elastic, when impinging upon one another, and failing to form into rouleaux; and in blood from a patient suffering from erysipelas these corpuscles seemed to lose their sticky appearance. This effect of the tinct. ferri chloridi was most marked with the weaker rather than the stronger solutions, and possibly may have been due to the astringent properties of the tincture.

From the fact that the exhibition of iron has proved of considerable value in the treatment of erysipelas, it may not be uninteresting, in connection with the foregoing experiments, to reproduce here the results of analysis of normal blood by Andral and Gavazett in two cases after exhibition of iron:‖

First Case.

	Previous to use of iron.	After use.
Water in 1000 parts	866.7	818.5
Fibrin	3.	2.5
Blood-corpuscles	46.4	95.7
Residue, serum	83.9	83.3

Second Case.

Water in 1000 parts	852.8	831.5
Fibrin	3.5	3.3
Blood-corpuscles	49.7	64.3
Residue, serum	94.0	100.9

It will be noticed in the above table that an increase in the proportion of blood-corpuscles took place after iron had been administered, and that at the same time

* Arch. f. Exp. Pathol. und Pharm., vol. xix. p. 357.
† Loc. cit.
‡ Phys. Chem., p. 163.
§ Loc. cit.
‖ Gamgee, Phys. Chem., p. 152.

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there was a corresponding decrease in the amount of fibrin present.*

Without attempting to indicate in what form the poison of erysipelas exists, either within or without the circulation, it seems nevertheless probable that the red corpuscles of the blood are in some special manner affected and their function as oxygen-carriers modified. In support of this may be mentioned the appearance of the corpuscles themselves under the microscope when first withdrawn from the circulation, their rapid decolorization and crenation, and the apparent readiness with which they give up certain component parts towards the formation of blood-crystals, as well as the apparent lowered vitality of the blood itself, as indicated by the rapid formation of active bacteria in it after withdrawal from the body; and, further, the known value of iron in the treatment of the disease, together with its known action upon either the corpuscles themselves or upon corpuscle-production;† whilst the appearance of erysipelas of the face on the right side in thirteen out of fifteen cases of that form of the disease observed (a fact most probably accountable for in the differing blood-supply of the two sides), and a tendency to periodic recurrence noticed in these cases and others, tend to support the position by pointing to the blood in general as affected.

Dr. Stillé,‡ in commenting upon the above-mentioned condition of the red corpuscles, says, "In a case of Kollman,§ of Leipsic, in which repeated hemorrhages took place, fatally exhausting the patient, it is probable that such blood-changes existed in a high degree. To them also may be attributed the altered action of the heart and the hæmic murmurs heard during life, and more immediately the fatty granular change sometimes found in the cardiac muscle."

The part which micrococci or other foreign organisms play in these changes has yet, perhaps, to be determined. P. Zweifel,‖ however, has recently advanced the hypothesis, based upon various experiments, that, as normal blood, by being deprived of its oxygen without being exposed to the influence of atmospheric germs, can become poisonous and acquires septic properties (certain specimens of non-deoxygenated blood also containing micrococci having been proved harmless), therefore no pathogenetic property is inherent in the organisms found in these experiments, unless these micrococci can form a poison in the blood as soon as there is no more oxygen to be consumed.

Assuming this proposition to be true, it will be seen that any interference with the functions of the oxygen-carriers of the blood would at once bring about the necessary condition for further pathological change through the medium of these organisms. Further, we are told that bacteria produce acid secretions, and Gamgee says¶ that all acids and salts having an acid reaction decompose hæmoglobin with the formation of hæmatin, a result which would ordinarily be prevented in the general circulation by the amount of alkalinity of the blood necessary to life, yet which nevertheless might readily occur in certain localities, as, for instance, in portions of the skin or in parts rendered tumid by previous inflammation. Again, any softening of the substance of the red corpuscles would probably increase the tendency of these corpuscles to leave the circulation and wander out, as the leucocytes are well known to do in numbers in inflammation.

These micrococci, therefore, found in the blood, in the lymphatics, and elsewhere, if harmful at all in the blood, can be so only when that fluid has lost some of its normal vital resistance: so we must go a step farther back, and inquire as to what this diminished resistance may be due. If we assume that the alterations of the red corpuscles, as already described, be a principal factor in the altered condition of the blood, which we know by clinical experience does exist, we should then expect to find that those remedies which tend to increase the tone of this element of the blood, or the supply of red corpuscles, would also be serviceable in treatment of the disease, which we know to be the case.

It is certainly the case that in the large majority of patients attacked by this malady there has previously existed an impoverished condition of the blood, brought on either by lack of proper nourishment, improper mode of living, debilitating disease, or some other depressing cause.

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* See also H. C. Wood's Therapeutics, Materia Medica, and Toxicology, p. 91.
† Wood, loc. cit. ‡ Loc. cit. § Loc. cit.
‖ Zeitschrift für Physiologische Chem., Phila. Med. Times, vol. xiii. No. 388, 1882, p. 14.
¶ Phys. Chem., p. 90.

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As to the possibility of the characteristic tailing and alteration of the red corpuscles noted being caused by an excess of fibrin-forming substances in the blood, or increased tendency of fibrin to form, I would refer to an article by Mrs. Ernest Hart,* in which she shows, by a process of fixing with osmic acid and staining by rosaniline, a tailing of certain corpuscles (third corpuscle of Norris),† analogous to the fully-developed red corpuscles, which she believes to be a source of the fibrin of the blood; and, further, to the articles (already quoted) by Dr. Davison, in which he states that there is an excess of fibrin-forming corpuscles (undeveloped red corpuscles) in all inflammatory blood.

TRANSLATIONS.

THE DIAGNOSIS OF TUBERCULOSIS OF THE LARYNX.—In opposition to the opinion usually held by authorities upon the subject, B. Fränkel teaches that in the majority of cases local tuberculosis can be recognized as such by its laryngoscopic appearances. This observation applies not merely to the more characteristic forms,—those cases in which isolated tubercles in the larynx appear, or tubercular infiltration, in which firm inflammatory œdema, especially over the epiglottis and the arytenoid prominences, rapidly leading to extensive destruction, occurs, both of which are easily recognized,—but especially to the tuberculous ulcer, a form of laryngeal phthisis which, according to most authors, is the least characterized, and the diagnosis of which requires confirmatory evidence by physical examination of the lungs, or remains doubtful. On the contrary, Fränkel holds that the *ulcus tuberculosum* is sufficiently well marked to be recognized from the macroscopic appearances alone. This is especially the case when the lenticular ulcer, so well described by Virchow, is present. Tubercle appears in the larynx first in the mucous membrane under the epithelium; then, from the rapid destruction of isolated or congregated masses of tubercle, there arises a superficial ulcer, which spreads more on the surface than it does deeply. The borders are rounded, and show an inflammatory area. The floor is bacon-like or caseous, and is covered with more or less detritus. In many cases there are also deposited in the walls of the ulcers, and in the larynx during life, miliary and submiliary granulations; but when these grayish, semi-translucent granulations are not found, the lenticular character of the ulcer is still sufficiently characteristic. It is not the color of the mucous membrane, and not the location of the ulcer, *but its form and its physical characters, upon which the greatest stress is laid in the diagnosis.* At the same time, it is not denied that there is a group of cases in which the diagnosis cannot be made simply by macroscopic examination. The complications with tubercular infiltration, and diseases of the cartilages, alter the image and give rise to appearances difficult to describe. In the course of time the lenticular ulcer itself loses its character, and it then gets deeper, and the glands become involved, so that forms arise which have no distinctive or characteristic appearance. In such cases it becomes necessary to corroborate the diagnosis, and it is customary to fly to other organs, such as the lungs; but cases have occurred in which the diagnosis remained for a long time in the dark. Since Koch's discovery of the specific bacillus of phthisis, however, a new means of determining the character of this ulcer has been provided. Fränkel recommends that the patient shall be requested to cough, so as to clear the pulmonary secretions out from the larynx, and then, with the aid of the laryngoscopic mirror, the surface of the ulcer is to be carefully wiped with a small brush, so as to obtain some of the specific secretion from the laryngeal region. Following Ehrlich's method of staining, the portion removed can be next examined microscopically for the bacilli, which, if present, establish the diagnosis as tubercle. The author examined sixteen cases for bacilli, and only experienced difficulty in one of them: in this there was so little secretion that he was unable to obtain any pus for examination. In the remaining cases he had succeeded, by following Ehrlich's method, in establishing their character. In three there were no bacilli; these cases suffered with constitutional syphilis. In the other twelve cases bacilli were found, in nine on first examination, in two on

* Quarterly Jour. of Mic. Science, July, 1882, vol. xxii., N. S., pl. xxi.

† Norris, in Physiology and Pathology of the Blood, London, 1882.

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second, and in one on the third trial. On repeating the experiment, he found the bacilli in the greater number of these cases again on first examination.

He further considers the value of the positive knowledge of the nature of the case, not only from a pathological point of view, but also from that of practice, in its effects on treatment and prognosis, and contends that the absence of bacilli permits a negative conclusion to be drawn. Among eighty cases in all, which he had examined, he declares that it was very seldom that a third examination of the secretion of the ulcer was required in order to establish its character. This permits a diagnosis between a tuberculous and a syphilitic ulcer to be made positively in cases otherwise doubtful.

Although negative testimony is ordinarily of limited value, the author claims that this expedient will generally enable us to decide as to the pathology of obscure cases. The method is also applicable to cases of pharyngeal tuberculosis and other varieties of tubercular ulcer. For the present, however, he considers it sufficient to point out a method by which, during life, we may, with full certainty, succeed not only in diagnosticating tubercular ulcerations of the larynx as such, but also by which we are enabled to distinguish them from other forms of laryngeal ulceration which are not tuberculous. Further experience has only confirmed his views, and he states in conclusion that whenever we are able to obtain some of the secretion from a laryngeal ulcer, if it be tuberculous, the positive evidence—that is, the presence of the bacillus—is *a rule almost without exception.—Berlin. Klin. Wochenschrift*, January 22.

THE DISINFECTION OF TUBERCULAR FLUIDS.—In a communication presented by M. Vallin to the Academy of Medicine of Paris, based upon inoculative experiments upon guinea-pigs with simple tubercular fluids and those treated with various agents, the author expresses the following opinions: "The contagious principle of tubercle is susceptible of attaching itself to furniture and other objects, where for a very long time it preserves its virulence unimpaired, until the moment when it again comes in contact with a medium favorable to its development." This effect can be prevented by the use of certain neutralizing agents, at the head of which he places sulphurous acid; boiling water occupies the second rank. A dilute solution of corrosive sublimate will have the same result, whilst nitrous acid is ineffective, even where comparatively large amounts are used.

In conclusion, the author recommends the systematic disinfection of hospital wards, prisons, infirmaries, etc., where phthisical patients have been treated, although the absolute efficaciousness of the means proposed has not yet been fully established.—*Revue de Thérapeutique*, February 1.

TREATMENT OF EPILEPSY.—At the St. Anne Asylum, under the care of Dr. Ball, the alkaline bromides are generally used, especially the ammonium salt. The following formula is given:

℞ Ammonii bromidi,
Sodii bromidi, āā 10 grs.;
Aquæ, 300 grs.—M.

A dessertspoonful to be taken in a cup of a weak infusion of valerian.

Of the above, four doses a day are used at the beginning, gradually increased to eight or ten if necessary.

In obstinate cases, the following pill—

℞ Ext. belladonnæ,
Zinci oxidi, āā 1 gr.

M. et in pil. no. 40 divid.—

may be given morning and evening.

Purgatives may also be needed, either as revulsives or to remove irritating substances, worms, etc., from the alimentary canal. Dr. Ball orders the following:

℞ Aloēs socotrin., 1 gr.;
Resinæ scammonii,
Resinæ jalapæ,
Hydrarg. chlorid. mitis, āā .50 gr.;
Saponis (amygdalin.), q. s.

M. Ft. pil. no. 24. Of these, three are to be taken night and morning, once a week.

The bromides of ammonium and sodium are preferred, they being well suited for this purpose by the great facility with which they are tolerated, even in large doses, by their prompt and sustained effect, by the absence of all phenomena of depression, and, finally, by the services which they are able to render in the cases where the bromide of potassium is without effect.—*Revue de Thérapeutique*, No. 3.

LOCOMOTOR ATAXIA SUCCESSFULLY TREATED BY ELECTRICITY.—At the meeting of

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German physicians and scientists at Eisenach, last September, Dr. Th. Rumpf reported two cases of locomotor ataxia greatly benefited by the use of faradic electricity applied with the brush, and in whom the symptoms had not returned after several years. He uses a current not quite strong enough to cause pain. One pole (the anode) is applied to the sternum; the other (the cathode), represented by the brush, is applied in rapid succession to the back and lower limbs. The duration of the application is ten minutes. The effect upon the lancinating pains is quite marked, and common sensation is greatly improved. In cases where the disturbances of sensibility and pain are very marked, and the disease is not too far advanced, this method gives praiseworthy results, which are unattainable by the older methods of treatment.—*Berlin. Klin. Wochenschrift.*

NEW THEORY OF URÆMIA.—Feltz and Ritter, of Nancy, having found that simultaneous ligation of both ureters caused a sensible increase, in the blood and in the serum, of the potassium salts, in spite of the supplementary gastro-intestinal excretions, conclude that the alkaline salts follow the same laws as the urea and extractive matters, which increase in the blood under these circumstances. The graver accidents of uræmia, however, do not coincide with those caused by the accumulation and retention in the blood of urea or extractive matters, but, on the contrary, correspond with the phenomena produced by the intravenous injection of fresh normal urine, or of equivalent solutions of potassium salts in distilled water. The authors therefore consider themselves warranted in admitting that the true agents of uræmic intoxication are almost always the potassium salts which have accumulated to excess in the blood.—*Revue de Thérap. Méd.-Chir.*, No. 3.

NEW METHOD OF ANÆSTHESIA.—A mixture of nitrous oxide gas and oxygen in the proportion of eighty-five to fifteen, according to Dr. De Saint-Martin (*Comptes-Rendus de l'Académie des Sciences*), is capable, under ordinary circumstances, of causing analgesia without anæsthesia. It may be inhaled for a long time without any inconvenience. If used according to the method of Paul Bert, in a room in which the air-pressure is increased, complete anæsthesia also may be obtained with this agent. Where it is desired under ordinary pressure, the same effect may be obtained by adding six to seven parts of vapor of chloroform.—*Revue de Thérapeutique*, No. 3.

SURGICAL TREATMENT OF UMBILICAL HERNIA OF INFANTS.—The treatment of this condition has not been very satisfactory, and only rarely has it been successful in keeping the children alive. Generally, in the lighter grade of cases the expectant treatment is pursued, and in graver cases the restoration of the viscera to the abdomen, and the application of antiseptic bandage so as to make compression. The ligature has been used to the neck of the sac, and it has at times been successful, but it has also been followed by a fatal result.

Krukenberg has reported a case in which the large hernial sac contained a part of the liver and colon; he restored the viscera, and, under rigid antiseptic precautions, opened the sac, dissected it out, and ligatured the edges with ten silk ligatures, only fourteen hours after birth. The wound was dressed antiseptically with a compress and bandage, and complete recovery followed.—*Archiv für Gynaekologie*, Bd. xx. Hft. 2.

PROPHYLAXIS AGAINST PHTHISIS IN HOSPITALS.—From a series of experiments upon tubercle-inoculation, and the effects upon the process by different disinfecting agents, M. Vallin has found sulphurous acid the most efficacious in preventing contagion. He therefore recommends that, in hospital wards where the air is infected by tuberculous patients, from time to time the rooms shall be vacated and thoroughly fumigated with sulphurous acid.—*La France Médicale; Comptes-Rendus de l'Acad. de Médecine.*

ERYSIPELAS IN THE STOMACH.—A case in which an attack of facial erysipelas extended to the pharynx and thence into the stomach is reported in *La France Médicale* (No. 75). The symptoms were pain in swallowing food, tenderness in the epigastric region, and obstinate vomiting for five days,—a feature which might be thought to be due to meningitis, but this supposition was promptly removed by the observed fact that there was a complete absence of other cerebral symptoms.

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PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, MARCH 10, 1883.

EDITORIAL.

PROPOSED LEGISLATION FOR THE INSANE.

IN a previous issue of this journal we printed, without comment, an analysis of the proposed law concerning the insane now under discussion at Harrisburg. The law seems to us, after careful consideration, a good one, but it is, we believe, being bitterly opposed by the asylum medical superintendents, both singly and collectively. We do not positively know what paragraphs are especially obnoxious to the superintendents, but are told that their hostility is especially directed against the free admission to the asylums which is secured for the outside medical profession, and the increase of their own responsibility. Under existent law, when a patient has once been legally committed to an asylum, he can be detained there indefinitely by the superintendent until he forces his way out by the legal processes, and the superintendent then be held harmless, even though he has kept a man of sound mind twenty years in the mad-house. This is of course wrong. The practical difficulty of guarding against this wrong is that a law devised for such purpose might readily expose the honest superintendent to vexatious suits and even unjust verdicts.

The proposed enactment protects the honest alienist just as far as an efficient law can. The section affirms that no penalty shall attach to a too long detention of a convalescent, "unless the judge, after trial and verdict, shall certify that there was proof to his satisfaction that the party charged acted with gross negligence or corruptly, or that he acted without reasonable or probable cause, or was actuated by motives other than the good of the person restrained." It would be better, perhaps, to amend this section by eliding all after "corruptly;" but, even as it now stands, certainly no judge would certify unless he had a very clear case to deal with. The judge has to take an active, not merely an acquiescent, responsibility. Opposition to any change in this respect of the present law is to be expected from those whose peace of mind and body is endangered; but it seems to us that it is not unjust that the superintendents be required to face responsibilities which fairly belong to their office.

Objections to medical visitation seem to us far less justifiable than the opposition we have just been discussing. We suppose there are few practitioners of medicine who really believe that most hospital superintendents are skilled in the treatment of diseases other than those to which their attention is habitually directed. We believe ourselves that the superintendent who really knows and has had practical training in the treatment even of nervous diseases (not mental) is an exceptional man. Most of these gentlemen have spent their lives in asylums away from large cities, and have had no outside facilities for familiarizing themselves with affections not belonging to their specialty. That an insane man should be forced, when he has a typhoid fever, to stake his life upon the skill of a physician whom no sane man would ever employ to treat a fever, is preposterous. It is but just that those interested in the life of the brain-sick man should have the right to protect such life as best they can when another vital organ is attacked.

In the past we have rather sided with the hospital superintendents in their difficulties; but it seems to us that they are now drifting away from the well-settled sentiment of the profession; and we earnestly hope that our readers will examine the proposed enactment, and make their opinions understood by their legislative representatives.

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THE NEW ANATOMY ACT.

THE bill now before the Legislature, submitted by a number of physicians of Philadelphia, will probably become a law. It is entitled "An Act for the promotion of medical science by the distribution and use of unclaimed human bodies for scientific purposes, through a board created for that purpose, and to prevent unauthorized uses and traffic in human bodies." Its provisions contemplate, primarily, the creation of a board of distribution, consisting of the professors of anatomy, the professors of surgery, and demonstrators of anatomy and of surgery, of incorporated medical and dental colleges, with one representative from each of the unincorporated schools of anatomy or practical surgery; the board so constituted being charged with the duty of apportioning and delivering unclaimed human bodies among the several institutions legally entitled to the same (the material needed for lectures and demonstrations by schools and colleges being first supplied) in proportion to the number of students in attendance upon their dissecting and operative surgery classes. Public officers having charge or control over unclaimed human bodies "shall, without fee or reward, deliver such body or bodies" to the board or its representatives. No such delivery shall take place, however, if objection is made by any of the kindred; and in case of a traveller dying suddenly, he shall be buried at the public expense. Persons having duties enjoined upon them by this Act will be liable to a penalty of from one hundred to five hundred dollars for neglect, refusal, or omission to perform the same as required.

The principal features in the former Act of 1866 are retained in this bill, which is a decided improvement upon the former in the fact that there will be a responsible board charged with carrying out the distribution of dissecting material in accordance with its provisions. The great objects sought to be attained by the former law were the legalization of anatomy and the prevention of traffic in human bodies between different States. This was the famous Pennsylvania Anatomy Act, which originated in the College of Physicians of Philadelphia, Dr. Wm. S. Forbes being its author, and it was principally owing to his personal interest in the matter that it was adopted. It was entirely experimental, being the first law upon this subject in this commonwealth, and, although its author urged that its benefits be extended at that time over the whole State, yet, when passed finally, its provisions were restricted by the Legislature to Philadelphia and Alleghany Counties. Since then a similar law has been enacted by a number of the other States of the Union. The present Act is intended to extend over the entire State; it creates a special board charged with carrying out the distribution and delivery of unclaimed bodies; and, finally, it directs that public officers "shall deliver" such bodies, instead of leaving it optional with them, or subject to their permission, as in the former law.

ANTI-VIVISECTION AGITATION AGAIN.

AS an echo to the renewed agitation of the subject in England, a movement has been, quite recently, inaugurated in this city, with the avowed object of enlisting popular interest against vivisection. It is stated that a bill is to be offered at the present session of the Legislature restricting vivisection, which is intended to be followed soon by another, making the performance of physiological experiments upon animals a criminal offence. The statement is made that the second act will abolish it altogether; but, as this is manifestly beyond the power of legal enactment to accomplish, it is more correct to say that, if passed, it will, at the most, simply make it a penal offence for future investi-

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gators to make such experiments upon any animal, even though carefully and humanely conducted and solely with a view to the advancement of that science which has for its great aim the alleviation of human suffering.

A public meeting held at Association Hall, March 2, was attended by some of our representative citizens, many ladies and gentlemen, and presided over by a judge of a civil court. Indeed, the new movement is being pushed forward with considerable vigor, its advocates in some directions perhaps showing more zeal than discretion.

It is unfortunate that in these public addresses the members of the medical profession, both inferentially and directly, are charged with defending and sanctioning wanton cruelty to the lower animals, although, in truth, we believe that they are, very generally, opposed to unrestricted vivisection and in favor of its regulation by law. It would be strange, however, if they, without protest, could permit themselves to be unjustly represented as devoid of the finer sensibilities of their critics, and as rendered incapable of humane feelings by their constant association with human suffering. A committee appointed by the College of Physicians will probably meet those interested in this movement, in order to frame a bill that shall be mutually satisfactory.

We dismiss the subject for the present with the observation that medical science recognizes physiological experimentation, when conducted in the proper manner, as a legitimate and necessary means of advancing research and adding to the store of knowledge. Experiments with new and old remedies upon animals will continue to be made, law or no law. If the supply of the lower animals is entirely shut off, we presume that it is intended that they shall be made on man, who still remains the unprotected prey of all experimenters, not excepting the medical and forensic.

LEADING ARTICLES.

A STUDY OF THE POISON OF THE HELODERMA SUSPECTUM, OR GILA MONSTER.

At the meeting of the College of Physicians of February 7, Drs. S. Weir Mitchell and Edward T. Reichert read a paper on a partial study of the poison of the *Heloderma suspectum*, or Gila monster. These gentlemen stated that for some years past it has been known to naturalists that the Gila lizard of Arizona and Sonora is endowed with anterior deciduous grooved teeth which communicate by ducts with large glands within the angle of the lower jaw, and that the existence of these arrangements suggests a certain power of poisoning, but as to which power very conflicting accounts reached them from Arizona. This creature, they said, had been kept in many houses as a pet of children, but seemed to be averse to using his weapons of offence. The occasional accidents from his bite were variously explained away, but among the Indians and settlers he enjoyed an evil reputation. Within a week they had received two letters from Arizona, one of which described him as "more peaceful and harmless than a young missionary," and the other as being "worse than a whole apothecary-shop."

This bad name of the lizard in Mexico is mentioned by Bocourt, Duméril, and Sumichrast, the latter being the fullest in his statements. According to Sumichrast, the lizard is slow and embarrassed in his movements, hides in the daylight, and especially in wet weather, to emerge at night and in dry seasons. He is said to have a nauseating odor, and is described as slobbering forth a sticky, whitish saliva when irritated. Sumichrast further says that the natives hold him in terror and consider him more fatal than any serpent. When the animal was made to bite a fowl, it died in twelve hours, with a bloody fluid exuding from its mouth, the wound being of purple tint. A cat bitten was very ill, but recovered, remaining thin and weak. The *Heloderma horridum* sent to Sir John Lubbock killed a frog in a few minutes, and a guinea-pig in three minutes.

Many years ago, Dr. Irwin, of the U. S. army, experimented on the Gila monster, and concluded it to be harmless; and Mr. Moran, of the National Museum, was

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several times bitten without serious results. Dr. Shufeldt adds further difficulty in the making up of the estimate of the powers of the *Heloderma*. The lizard he speaks about, which was exhibited to the College by Drs. Mitchell and Reichert, was sent to the Smithsonian Institution by A. T. Burr, U.S.A., and is the *Heloderma suspectum* of Cope. Dr. Shufeldt, in company with Prof. Gill, while examining for the first time this specimen, was about to return the animal to its cage, when the left hand of the doctor, who was holding it, slipped slightly, whereupon the highly indignant and irritated animal made a dart forward and seized his right thumb in his mouth, inflicting a severe lacerated wound, and sinking the teeth of his upper maxilla to the very bone. The animal loosened his hold immediately, and he was placed in his cage.

Dr. Shufeldt stated that by suction with his mouth not a little blood was drawn; but the bleeding soon ceased, to be followed in a few moments by very severe shooting pains up his arm and down the corresponding side. The severity of the pains, with their unexpectedness and the nervous shock and rapid swelling of the parts, caused him to become extremely faint. The action of the skin was increased, perspiration flowing profusely. A small amount of whiskey was taken. The same night the pain was so great as to allow of no rest, although the hand was kept in ice and laudanum; but the swelling was confined to the hand. The following morning the swelling was greatly reduced, and in a few days the wound healed kindly. After the bite the animal is stated to have become dull and sluggish, simulating the torpidity of the venomous serpent after the infliction of its deadly wound.

The specimen shown by Drs. Mitchell and Reichert has eaten but once since they have had him; but the monster is said to live on bird-eggs and to eat daily of food while in captivity. The sluggish habits ascribed to the *Heloderma* in general are noticed in their specimen, and they think that it is clear from Dr. Shufeldt's accident that, like the habitually inert Crotalidæ, the creature is capable of sudden and unexpected agility in attack. They further stated that they expected in the spring a number of *Helodermas*, and would then be able to complete the study of the poison of these interesting lizards,—the only members of the family of lizards as yet known to be poisonous.

The Gila monster, they said, inhabits the dry hill-sides of Arizona, and is said to reach the length of three feet. The specimen exhibited was about fourteen inches long, and had, from war or accident, lost his teeth, no new ones having taken their places; and without them he would certainly be as harmless as a rattlesnake deprived of his fangs. As these teeth are very small and easily removed, their absence may account for some of the instances in which the lizards have bitten and done no great harm.

Experiments made in the usual vague way, by allowing the lizards to bite animals, are obviously untrustworthy, so that they thought it best to use saliva in known quantities. The fluid was obtained by provoking the animal to bite on a saucer edge, which it was indisposed to do. When once it had seized the saucer it was hard to pull it away, so powerful was the grip of the animal's jaws. After a moment a thin fluid like saliva dripped in small quantities from the lower jaw. It was slightly tinted with blood, due to the violence of the bite, and it had a faint and not unpleasant aromatic odor. The secretion thus collected from the mouth was distinctly alkaline, in contrast to serpent-venoms, which are all acid in reaction.

The records of a number of experiments made by these gentlemen were then read. In the first experiment about four minims of the saliva above collected were diluted with one-half cubic centimetre of water and injected into the breast-muscles of a large, strong pigeon. In three minutes the pigeon was rocking on its feet and walking unsteadily, and at the same time the respiration became rapid and short, and at the fifth minute feeble. At the sixth minute the bird fell in convulsions, with dilated pupils, and was dead before the end of the seventh minute.

In comparing the effects of the lizard-poison with those of serpents, these gentlemen noted that the first contrast to the effects of serpent-venom was shown when the wound made by the hypodermic needle was examined. There was not the least trace of local action, such as is so characteristic of the bite of serpents, and especially of the Crotalidæ. The muscles and nerves of the animal above poisoned responded perfectly to induced currents

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and to mechanical stimuli. The heart was arrested in the fullest diastole, and was full of firm black clots. The intestines looked congested. The spine was not examined.

Two experiments were also made on etherized rabbits to determine the effects of the poison on the blood-pressure and pulse. One of these animals was in a normal condition, and the other with cut pneumogastrics. To each of them was given one-sixth of a grain of venom dissolved in a little water and injected into the external jugular veins. In both animals the results were practically identical. In the normal animal the pressure fell to twenty millimetres in five minutes, and in the animal with cut pneumogastrics to thirty millimetres in one minute and thirty-five seconds. The pulse-rates in both animals were primarily diminished and then increased. The results of the experiments being so nearly identical, it may be considered that the effect on the heart is direct, and not by inhibition through the pneumogastrics.

The results of the autopsies, made immediately after death, were identical: heart arrested in diastole; heart does not react to induction currents; muscles everywhere respond to electric stimulation; motor nerves intact; cord unirritable, and will not respond to the strongest current produced by one large gravity cell with Du Bois-Reymond's induction coil; bowels still irritable; peristaltic movements occur spontaneously; the intestines are natural in color, as are all other organs. After five minutes the heart began to contract, and was finally found in a systolic condition. The interior of the organ was full of black clots, especially the auricles, the left ventricle containing but a very small clot.

In order to determine still further the effect on the heart, a frog was killed and the heart exposed, there being placed upon it a small portion of the dried venom. It was then found that an immediate but gradual fall in the force and number of the beats occurred, and that the heart was arrested in one hour and thirty-eight minutes. In another experiment in which the "cut-out" hearts of frogs were used, one of which hearts was poisoned, the poisoned heart was killed in forty minutes, while the other remained beating for some time after; and in another experiment on two pithed frogs with exposed hearts, on one of which was placed some of the dried poison, after a while the poisoned heart was beating very feebly and did not fill with blood, while the normal heart pulsated firmly and filled well with blood at each beat.

These gentlemen then concluded that the poison of *Heloderma* causes no local injury; that it arrests the heart in diastole, and that the organ afterwards contracts slowly,—possibly in rapid rigor mortis; that the cardiac muscle loses its irritability to stimuli at the time it ceases to beat; that the other muscles and the nerves respond readily to irritants; that the spinal cord has its power annihilated abruptly, and refuses to respond to the most powerful electrical currents.

They further stated that this interesting and virulent heart-poison contrasts strongly with the venoms of serpents, since the latter give rise to local hemorrhages, and cause death chiefly through failure of the respiratory muscles and centres, and not by the heart, unless given in overwhelming doses. They lower muscle and nerve reactions, especially those of the respiratory apparatus, but do not, as a rule, cause extreme and abrupt loss of spinal power. Finally, they give rise to a wide range of secondary pathological appearances which are absent from *Heloderma*-poisoning.

Drs. Mitchell and Reichert said that there remains in their minds no doubt as to the fact that the fluid which drips from the mouth of *Heloderma* when it bites is a very active poison; that the present study was, however, limited in range, and that they cannot yet feel sure that the fluid in question comes from the glands now presumed from their relation to the teeth to be poisonous.

The briefest examination of the lizard's anatomy makes clear why it has been, with reason, suspected to be poisonous, and why it poisons with so much difficulty. Unless the teeth are entire, the poison abundant, and the teeth buried in the bitten flesh so as to force it down into contact with the ducts where they open at the crown of the teeth, it is hard to see how even a drop of poison could be forced into the wounds. Yet it is certain that small animals may die from the bite, and this may be due to the extraordinary activity of the poison and to the lizard's habit of tenaciously holding fast to what it bites, so as to allow time for a certain amount of absorption.

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It is plain enough that a lizard as small as the one exhibited would be very unlikely to inflict a wound fatal to man; but it is possible that the larger animal—and it is said to reach a length of three feet—might prove a more efficient poisoner.

In the concluding remarks as to the nature of this poison they stated that the recent researches of Dr. Sternberg and Prof. Gautier have shown that human saliva may kill a rabbit in twenty-four hours, according to the former observer, and a pigeon in a few hours (he does not say how many), according to the latter, if a quantity of saliva has been concentrated by heat and so used. Prof. Gautier thinks the saliva, and all venoms, owe at least a part of their power to normal ptomaïnes or animal alkaloids, the products of putrefactive processes, and recalls to us the fact that most secretions are measurably poisonous.

The answer to these views, Drs. Mitchell and Reichert said, they will consider elsewhere and at length, but that it will be sufficient here to say that there is no resemblance between the symptoms caused by the known ptomaïnes and those produced by any of the venoms. When it was shown that healthy human saliva was competent to kill, it was natural enough to leap to the conclusion that the venoms were merely concentrated salivas. The analogy ends with the fact that both may cause death, but the one may kill in twenty seconds, and the other requires at the least many hours; whilst also it seems, as regards saliva, to be in some degree a question of the toxic activity of certain individuals, not all being so uncomfortably endowed as Dr. Sternberg himself.

CORRESPONDENCE.

LONDON LETTER.

FOR some time past a movement has been on foot to bring together the medical students of London, and the *Medical Union Society* has made its formal *début* before the public. It is intended to make a species of club, where the members can meet together, can read, can interchange courtesies and even ideas by means of debate. Such a scheme has much to recommend it. There are eleven hospitals in London, each of which has a medical school attached to it. Of course, even amidst the profession of medical men in the great metropolis, it cannot be contended that each of the members of the medical staff at these numerous institutions is a decided genius, giving out coruscations of light. But, as matters stand, and have stood for some time, the students of each of these teaching institutions know little of other medical men except their own teachers; consequently these latter lose nothing by comparison, a means of measuring individuals which is distasteful to some of the minor hospital lights. As a rule, too, in the reports issued by various hospitals, little or nothing is said about the work done elsewhere than by the staff of that institution, unless it be abroad. It is safe to mention the work done by a foreigner. By such arrangements the student is safely fenced in, and knows little of what is being done elsewhere. Now, this may be all proper enough in the interests of the men who constitute the staffs of teaching hospitals. Of course, the better men do not care about nursing the student so solicitously, but there is the element of less able men who do care. Not only is it a matter of fees,—at the time of the student's career a positive element,—but there are the wider potentialities of other practice, with its consultations, to be borne in mind. Men perhaps know a little of some one other school beyond their own; and it must be admitted that in past days the conversation of two men educated at different schools in London, when comparing the luminaries of their respective hospitals, has had a mirth-provoking element in it, in the shape of the utter ignoring of all other metropolitan schools, and of medical education elsewhere on the face of the earth. The medical student of the present day has wider views than once sufficed his predecessors, and likes to peep beyond the precincts of his own hospital proper, to see what is done elsewhere. Nor can it be urged that this is other than desirable in the interests of his future patients as well as himself. So a movement was set on foot, which has prospered so far without much encouragement from the medical teachers of the metropolis, who, from what is said by those behind the scenes, have thrown cold water on the scheme, so far as they could. However, it was determined to have an inaugural evening. This was held on Wednesday, January 31, in the Holborn Town Hall, a central and convenient position, and was a decided success. Dr. Danford Thomas, the respected coroner for Central Middlesex, is the treasurer of the society, but the other officials are students in the strictest sense of the word. There was a preliminary exhibition of microscopic objects, chosen with special reference to the fact that a large number of ladies were expected to be present, and very beautiful objects were exhibited, the sight of which greatly interested the female element. Then there were some

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surgical instruments (not obstetrical) on show, and also some fine photographs of several of our professional celebrities. A large number of both sexes had gathered together by the time Dr. B. W. Richardson, F.R.S., had reached the hall. The chair was taken by Henry Power, F.R.C.S., the ophthalmic surgeon to St. Bartholomew's Hospital, and the well-known editor of Carpenter's Physiology. In a few well-chosen words he introduced the deliverer of the address, Dr. Richardson, who strongly resembles the late illustrious Gambetta, and photographs of him were recently sold in both London and Paris for the French patriot-statesman. The acoustic qualities of the building were very unsatisfactory, and did not do credit to the mellifluous voice, which usually holds its audience rapt in attention. The doctor commenced by saying how much gratified he was by the request that he should deliver the inaugural address to the new medical association. He said the formation of this Union was a matter fraught with great interest in these sensitive times,—"sensitive," because every one is becoming touched by the light of knowledge. Hitherto the learned professions had constituted the only lamps and fires of knowledge; but there was a general blaze coming, and it would be curious to see how they would stand the test of competitive light. He had had the inestimable advantage of what was a very good education in his day; but what was learned then was actually less than what was now open to every child (by the action of our School Boards). The professional fight was easy then, compared with now. He said the secrets and mysteries of the profession no longer hold the position they did with the public, with its increasing knowledge. The school boards now are decorated with better physiological and anatomical diagrams than professors possessed in his student-days; while the teachers in these schools constituted the most critical audience to be found anywhere. Our territory is invaded on all sides, and the fight to hold it will prove fiercer and fiercer every year. Once, too, when a man did a really good thing or made a useful discovery he gained a distinction at once brilliant and permanent. Now one discovery is soon eclipsed by another, and each is lost in the general advance going on. The medical profession is not backed by representatives in the ruling bodies of the nation, like the church, which has its spiritual Peers, and the law, which has no less than one hundred and twenty-two representatives in the House of Commons. The medical men in the House at the present time are four; yet sanitation is the work *par excellence* of the present. He was glad to see that their programme included ready access to the best reading of the time. Judicious reading, by which a man could compare and correct his own observations, was the best scheme of education for a medical man. Here he quoted from the "History of Medicine," written in Newgate Prison by Dr. Friend, once member for Launceston: "Every physician will and ought to make observations for himself, but he will surely arrive at the soundest judgment who compares what he sees and what he reads together. Were it not for this, the oldest physician would always be the best practitioner, and there would be no difference in respect to the theoretical part between an old woman and the most regular professor." He then referred to the debates and discussions which they contemplated, and expressed his belief that such training would be of service to them after their student-career had given place to professional life. He felt bound to admit that, while student-life at some schools was admirable, there was much to be desired at other schools. The scene he personally had witnessed at the opening and prize-giving at one great medical school was such as to call for painful observations from outsiders on the class of men to whom they might one day have to commit their dearest interests. He then urged upon them the desirability of cultivating culture. Writing, as he was, the history of the medicine of this time, he begged that they would relieve him from the necessity of making any apologies for the student-life of the present time. He recommended the reading of other works than medicine. Above all things he advised the study of biography. He said, "A man who will begin as a student to learn the lives of great men of the past, and will pass from one life to another regularly until he has made as many of the great ones of the past his bosom friends as he can, will at all times be miles in advance of other men who have made no such friendships." He then went into some practical details as to how a library should be formed, and some of the less studious youths present must have been rather staggered at the range he indicated. After this he reviewed the subject of debate as a factor in education. It was capable of doing much good, if conducted properly. A good speech should both tell at the time of delivery and "carry afterwards." Mere brilliant-effect speech was of little real value compared to more lasting speech. Repartee might be stinging, but it was usually provoking, and little more. Such smartness had ruined many a good speaker. First let the subject of debate be well considered before it was discussed. In order to speak well, he advised his audience to cultivate the habit of listening to good speakers. He himself had done so for years, and had come to the conclusion that there are four classes of public speakers. First there are those who write out their speeches and then commit them to memory; these constitute the mechanical or phonographic type of orator. Then there is the group of natural orators, who can speak from the heart without preparation.

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Then there is a third group,—viz., those who prepare their subject-matter carefully, but leave the words to come at the time,—the common-use type of speaker. Others carefully prepare a manuscript, and read therefrom; some of these are mere readers, others something more. He called this the group of refined or reasoning orators. Learning the piece by rote is all right for the actor, but for the orator it is labor in vain. The fourth division was the one he recommended to the medical student. Debate should play but a subordinate part. As to rapidity of delivery, he thought the rate of one hundred and thirty-five words per minute, adopted by John Bright, would give most satisfactory results. As to the relation of the Union to the future of medicine, he fervently hoped the bond of union commenced in student days would last throughout professional life. This was very desirable, since the strict professional etiquette of past days is dissolving away. Once, when a patient wished to change his physician or consult another, the first must be informed thereof. Now patients consult whom they like, and not a few visit several physicians in a day, and then compare what they have said, as if they were talking over the pictures of the Royal Academy. Nor was a return to the old strict etiquette practicable: therefore the profession must have unity of thought and act. "Attain," he said, "this common excellence, and the public will soon tire of making the merry-go-round from one practitioner to another, of turning them all inside out when the visits are completed, and of suggesting that the opinions they have heard are little more than accidental expressions of individualized habit, rather than the sound dictates of common science and common learning." He then pointed out that when union became too exclusive it became "a nuisance of nuisances." He said, "I know of nothing in life so small, nothing in life so conceited, nothing in life so selfish, as a family so united that it knows no family, loves no family, admires no family, except its own." (It is just this one-school family arrangement, at present existing, which this Union is intended to demolish, instituting something better and wider in its stead.) "Such families come usually to grief: they can't evolve." He continued: "Let the human family, not the medical, be that to which you are allied, in which all your deepest interests are involved, for which you live, and move, and labor." He then, in words of serious warning, pointed out how desirable it is never to issue any discovery to the world until it is an assured fact. The world was quick to take up any advance in our art, but it resented being cheated into praising something which gave promise, but which failed to make good that promise. Once disappointed, the world, like the individual, was chary about according its belief a second time. ("Once bitten, twice shy," is a North-Country proverb.) At this very moment in the career of medicine it is coming under rebuke of this kind. A vague hypothesis as to the origin of one particular class of disease excited exaggerated expectations, on grounds lying away from the course of practical medical observation and research. The credulous world, believing the speculator, has leaped, naturally enough, to the conclusion that, by a grand stroke of discovery, one at least of the worst and most fatal of human diseases was about to be all but miraculously enchanted away. But time goes on, the disease remains unchanged, and the expectant world, seeing the vanity of the expectation, begins to turn round and to treat as a wanton delusion not only the speculation, but any measure of good which incidentally came out of it." (Oh, tubercle bacillus, you see what positive harm and what little potential good have come out of you as yet, despite the blare of trumpets with which you were received! Go hide for a while, till just views of you obtain.) After this the matter of preventive medicine was touched upon. The doctor got on his favorite topic, and brought it out rather humorously: "You have a race to run with the general public, and if you do not take care it will get ahead of you, and undermine your curative skill altogether by leaving you nothing to cure. You may boast of your physiological learning; but where will it be if the people get it up for preventive purposes as heartily as you? You may boast of your pathology; but where will that be if the causes that beget it are removed wholesale? Think only of the book of pathology that will be closed to you when the use of only one disease-producing agent—*alcohol*—is, as it surely will be, thrown entirely out of use, and such like other evil agencies that are entirely under human control. You may boast of your materia medica; but how long will that be wanted when men are wise and call for it as reluctantly as the members of the faculty do themselves when out of health? You may boast of your diagnosis, your prognosis; but when pathology is wanting, and materia medica is a ghost, of what use are they?" After an eloquent appeal for "absolute honesty of purpose" in all relations of life, he concluded his address with a hope for the prosperity of the Union.

A vote of thanks was then moved by Mr. Gresswell, student at Westminster Hospital, and seconded by Mr. Reade, student at St. Bartholomew's Hospital, and carried by acclamation. A vote of thanks to the chairman drew from him in his reply a hope that the Union, with its discussions and debates, would enable those who belonged to it to get out their knowledge readily. As an examiner of experience, he could say it often was difficult and tedious to get out of a candidate what he really knew, because he was in the habit

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rather of taking in information than extruding it. Among those present belonging to the staffs of teaching hospitals were a number of the teachers of St. Mary's; and beyond them, Mr. Arthur Durham, of Guy's, Mr. Walter Rivington, of the London, Dr. Southey, of St. Bartholomew's, and Mr. Spencer Cobbold, of the Middlesex; but, as a rule, the teachers were conspicuous by their absence. Nevertheless the *conversazione* was a great success. Some vocal and instrumental music followed; and then, last but not least, came Chang, the huge Chinese giant, with, decidedly least, the Male Midget, looking uncommonly like a wax doll, the size of an ordinary fœtus at full time, perched on the giant's hand and held aloft, holding tight on to the thumb.

Such, then, constituted the first formal meeting of a Union commenced by medical students themselves, in their own interests, in England. In Edinburgh the Royal Medical Society for Students has existed for many decades, and has been credited with doing much towards giving a finish to the student which has stood him in good stead in after-days. Probably this Union will be copied elsewhere, where there are many medical students attending rival teaching institutions. For such a means of widening the student's experience is very desirable. One good end it will certainly achieve,—it will break down the close-borough element which still exists in medical schools, and which forms such a temptation to many men to move mountains in order to become attached to a teaching school, not so much from any intrinsic fitness to teach, as from a wish to cultivate the acquaintance of the student, first for a share of the class-fees, and ultimately for the consultation-fees forthcoming when the student enters practice. This it is which has led to the excessive resort to testimonials in order to obtain posts,—a resort which the Germans look down upon and the French scoff at. Anyhow, the student is beginning to see that wider acquaintanceships are becoming desirable; and it is very certain the public will do all it can to foster the scheme, which has every claim to respect.

J. Milner Fothergill.

NOTES FROM SPECIAL CORRESPONDENTS.

CHICAGO.

OUR medical schools are just now closing the regular winter course, Rush leading with a class of very nearly two hundred members.

On the occasion of the commencement exercises the faculty appeared upon the platform in the gown of the doctorate, this innovation being in commemoration of the fortieth anniversary.

The faculty made a very satisfactory appearance in the black robes, and it is hardly a question that it is an improvement upon the somewhat heterogeneous and too business-like attire usually worn on such occasions. This custom, borrowed from our transatlantic neighbors, lends additional dignity to a ceremony that should be dignified and impressive. In the doctorate address the Code of Ethics was criticised, and the orator of the occasion urged that, as our National and State Boards of Health were made up of regulars and irregulars, and as the regulars and irregulars composing those bodies recognize each other as standing upon a common professional basis, and consulted, the profession at large, regular and irregular, also might fraternize on other occasions,—*i.e.*, meet in consultation. This was entirely interrogative, the proposition, simply stated, being that since physicians who claim to differ radically in their methods of practice can meet to discuss sanitation and medical politics, they may also consult harmoniously upon therapeutic questions with advantage to the patient. Of course most of those present could hardly yield assent to this proposition. The commencement exercises took place at Central Music Hall, and the banquet in the evening was given at the Grand Pacific Hotel.

Chicago College will have about thirty-six graduates; the aggregate attendance at this school, however, is slightly less than last year.

Probably the new school, the College of Physicians and Surgeons, now in its second year, attracts a following from the older institutions. The Woman's Medical College closed its course on the 27th, with the usual exercises, fifteen ladies receiving the M.D. degree.

The free dispensary question is again attracting attention, as the old abuses are active. The distribution of relief from most of them is not always well judged. Indeed, the person often selected to pronounce upon the worthiness of applicants is entirely unfit for the service.

Almost every physician in this city has felt the necessity for some means which might give a degree of system to the employment of nurses for the sick. We are without a bureau of registration or agency of any kind keeping a record of this class of help.

February 28, 1883.

A Bon Mot of Arago's.—"What are comets made of?" asked a French lady of the distinguished *savant*. "Madame, I do not know." "Then what is the use of being an Academician?" "Madame, that I may be able to say I do not know."

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PROCEEDINGS OF SOCIETIES.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

A CONVERSATIONAL meeting of the Society was held at the hall of the Society, February 13, 1883. Dr. E. E. Montgomery read a paper entitled "Is Craniotomy Justifiable?" (see p. 387).

DISCUSSION ON CRANIOTOMY.

The President stated that it was desired that in the discussion particular attention should be given to the following points:

1st. Should craniotomy be performed more than once for the same patient?

2d. Should it be performed when the woman is the victim of cancer uteri, phthisis, or heart-disease?

3d. Should it be performed when the conjugate diameter is less than 2½ inches?

Dr. Albert H. Smith said that time would permit only a partial discussion of the paper. He admired the author's boldness in attacking the generally-received opinions. Craniotomy is certainly an operation at times of great risk to the mother, but he was hardly prepared to assent to the sweeping position Dr. Montgomery had taken. It had been assumed in the paper that the operation is performed on living children; but this must be rare. Sometimes, indeed, the necessity for rapid delivery might involve the killing of the child, but in most of the instances the child is dead by the time the operation is decided upon. He had himself never, so far as he is aware, put the perforator into the skull of a living child, having always continued efforts at extraction until the last moments of its life. He felt obliged, also, to dissent from Dr. Montgomery's position that craniotomy is a necessarily dangerous operation to the mother. We can mutilate the head of a child without imperilling the mother, and the operation really offers the best method of removing a dead child, except in cases in which the life of the mother depends on taking the child through the abdominal wall. One of the dangers of craniotomy is too rapid delivery. If we perforate the head, and then draw quickly and rapidly, we lose the benefit of the wire-drawing and moulding power of the uterus. It is best to leave the child to be expelled—largely, at least—by the uterine action, compressing the head with forceps, but not dragging on it, which latter practice has been the cause of fatal results. Dr. Smith's method of procedure, when the pelvic dimensions are such (say antero-posterior diameter 3¼ to 3 inches) as to give hope of natural delivery, is to place a pair of Davis forceps on the child's head, and, if it is somewhat small, to make efforts at extraction as long as the mother's tissues will bear it. If these efforts fail, the child is probably already dead. He then lashes the blades of the forceps together, and, introducing a closed perforator, lets the brain ooze out, closing the forceps slowly until the head is reduced. If no urgent symptoms occur, the delivery is allowed to proceed under the mother's own efforts. He has lost but one craniotomy case.

Dr. Smith did not agree with Dr. Montgomery's view that traction with the forceps should be made rapidly. It is true that the head may be pressing injuriously on the soft tissues, but this is only when it has really entered the excavation of the pelvis. He detailed a case in which the head of the child remained for a long while above the superior strait, until finally craniotomy was decided upon, and the instruments were sent for; but by the time they arrived the head had advanced, and a living child was finally born.

An answer to the question whether craniotomy is justifiable when the pelvic diameter is under 2½ inches would depend on the method of delivery pursued by individual operators.

Comparisons of the results in ovariotomy and Cæsarean section cannot be safely instituted, because of the unfavorable conditions under which the latter is performed, unless the patient should be taken to a hospital, which would of course be a risk. In regard to the Porro operation, it should never be performed where premature labor could be substituted.

In cancer of the cervix, craniotomy is rarely justifiable if the bony canal itself is large enough. So many cases of cancer of the cervix have terminated with natural delivery that we see that nature is capable of relieving herself if given time.

As to the question, Is it justifiable to perform craniotomy twice? Dr. Smith thought the statement in the paper too sweeping. For his own part, he had urged premature labor after first craniotomy, and, it being refused, he had performed craniotomy a second time. He was glad to see that Dr. Montgomery had urged examination before labor. In this relation might be mentioned the instruments which had been invented for measuring the child's head.

Dr. Goodell said that the questions raised in Dr. Montgomery's admirable paper, being ethical ones, were very difficult to answer. He thought that repeated craniotomies were justifiable, because sometimes a living child had been born after several craniotomies had been performed. He objected to the statistics given by Dr. Montgomery to show the fatality of craniotomy, as being obsolete. Denman and Collins knew nothing of antiseptic methods, and they delayed the operation as long as possible, because they were not familiar with the use of the forceps. Death from craniotomy is generally due to

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delay. Dr. Goodell does not think it necessary to wait until the child is dead, but as soon as the necessity for craniotomy is decided upon he proceeds at once to operate. In the majority of cases simple perforation of the skull and the breaking up of the brain are the only measures needed, and these are certainly not dangerous to the mother. He deemed it allowable to perform craniotomy more than once on the same patient, if need should arise; but in most cases of very bad deformity the induction of premature labor will be preferable. He would not hesitate to perform the Porro operation, and in certain cases would even teach preventive measures. Yet, on the other hand, to vindicate himself he cited the case of an insane girl, who was sufficiently rational to be allowed considerable liberty at an asylum in which she was placed, and who has twice given birth to illegitimate children,—children that will probably become insane and be a burden to the commonwealth. He had refused to remove the ovaries from this woman, although urged to do so by the superintendent of the asylum. His refusal was based on the ground that such an operation, since it did not quench sexual desire, would encourage prostitution, and that he would demean himself by performing it. In reference to the propriety of performing abortion in narrow pelves, Dr. Goodell thought it best to leave the decision to the patient herself. He did not believe that Cæsarean section will ever be as successful as ovariotomy, because in the former the peritoneum is always found healthy and vulnerable, while in the latter it is found thickened by pressure and structurally changed. Again, in pregnancy the pelvic organs are gorged with blood, and therefore more prone to take on fatal inflammation. To illustrate this, he stated that he had last year performed in the University Hospital a most difficult ovariotomy, in which universal adhesions were present, and the omentum was so torn that its remnant was compared by one of the bystanders to the battle-flags after the late war. The woman recovered, with hardly a rise in temperature. On the day the operation was performed, a powerful, healthy negro was brought into the wards, who had been stabbed in the abdomen with a slender stiletto. The weapon was so blunt that the intestines were not wounded, and no internal hemorrhage took place, yet the man died from peritonitis.

As to the impropriety of performing craniotomy in hopeless cases of phthisis, uterine cancer, or cardiac disease, this was, to his mind, a question to be decided by the woman and her husband, not by the physician. We should decide the questions of ethics raised in Dr. Montgomery's paper by bringing them home to our own firesides, and especially to the bedside of those near and dear to us.

Dr. Parish, referring to the question as to the propriety of performing craniotomy in a patient affected with phthisis, said that he would not subject a woman to the great dangers of the Cæsarean section in order to save a child that will probably die anyhow very soon. So in women affected with heart-disease the chances should be thrown in favor of the mother. Dr. Montgomery would be obliged to admit that, except perhaps in very contracted pelves, craniotomy is an operation of much less danger to the mother than Cæsarean section, Porro operation, or gastro-elytrotomy. Successful results are more frequent than Dr. Montgomery's statistics indicated. Professor Ellerslie Wallace, for instance, had lost only three out of twenty-one cases. In the fatal cases the mothers were doomed before the operation, from too long delay. In pelves of less than 2¼ inches Dr. Parish prefers the Porro operation or gastro-elytrotomy, but in larger pelves we get better results from craniotomy. He considered the mother's life as of more value than that of the child. In some cases the position of the fœtus will determine which operation is best. In face-presentation, the head being immovable in the pelvis, fatal results might be expected to follow the Cæsarean operation. Another point is that the patient may be very young, and it would be wrong to subject her to the greater risk of abdominal section, as her frame may become developed and later labors be successfully conducted. Such results have been known to occur. Further, we must note that craniotomy does not require so much skill as the Porro or Cæsarean operation. In these latter not only is a trained surgeon required, but also several skilled assistants; but the delivery of a woman has often to be accomplished by a single physician remote from help. One operator may perform craniotomy without assistance as successfully as with it.

Dr. W. S. Stewart said he understood that seventy-five per cent. of the cases of Cæsarean section perish: if this is true, craniotomy must be much the safest. He did not think we ought to be so ready to recommend, in general, premature labor, as it would be encouraging what is both legally and morally wrong. He detailed a case in which he delivered a live child from a patient on whom in a previous pregnancy craniotomy had been performed, and was convinced by the statements made to-night, and by his own experience, that were the Cæsarean only permitted, many deaths would result where neither operation would be necessary.

Dr. J. V. Kelley agreed entirely with Dr. Montgomery, especially as to the moral question involved. The child has an equal right to its life with the mother, no more and no less; and the plea that the mother has claims superior, by reason of family ties, is one not founded in justice. Neither have we anything to do with the question as to whether

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the world would or would not be benefited by the birth of any particular child. The obstetrician should always endeavor to save life, and not to destroy it: the latter power belongs to God alone, and we have no right to rob Him of his attributes. Dr. Parry's statistics showed that in pelves of 2½ inches or less, more women would be saved by Cæsarean section than by craniotomy, plus the number of children rescued, which was about seventy per cent.

Dr. Montgomery, in closing the discussion, said he could not agree with Dr. Smith as to the advisability of waiting until the child has died: such delay is as culpable as the direct performance of the operation, as it imperils the life of the mother. He did not in his paper advocate Cæsarean section in preference to craniotomy in a pelvis with a conjugate diameter greater than 2½ inches, and the child dead; though if the child can, without additional risk to the mother, be delivered by the forceps or by turning, these should be preferred, on account of their effect on the mind of the mother. In pelves with a conjugate less than 2½ inches he advocated Cæsarean section, though the child be dead, for statistics show better results for the mother. The practice of leaving the child after perforation of the head, in order that it should be moulded, was formerly followed, but discontinued on account of decomposition of the fœtus and septic infection of the mother. He regretted that no allusion has been made to the practice of symphyseotomy. Harris has lately published a paper upon the subject, showing the results of fifty-three such cases in the practice of Italian physicians; forty-three women and forty-two children were saved. When we have an operation which offers such results for the mother, we should not resort to one which is certain death to the child. In answer to Dr. Thomas, he said that much can be learned by external examination,—more, indeed, than by vaginal examination alone. The position of the child can be determined, and often malpositions corrected. If examinations were more common, attendants would be forewarned of complications, and be able to surround many patients with favorable conditions. Even under the most unfavorable conditions he thought that in pelves of less than 2½ inches conjugate diameter Cæsarean section would be less fatal than craniotomy.

NEW YORK ACADEMY OF MEDICINE.

STATED MEETING, FEBRUARY 15, 1883.

FORDYCE BARKER, M.D., LL.D., PRESIDENT, in the chair.

DR. WILLIAM H. DRAPER read a paper entitled "Diet in the Treatment of the Gouty Dyscrasia." The author said that the relations of food and nutrition, and the evolution of vital energy, to the etiology and treatment of disease, were matters of the greatest interest and importance to the physician, and the fact that these questions were at present attracting wider and wider attention was an encouraging sign of the progress of scientific medicine. The author then referred in a few remarks to the commonly-accepted view of the pathology of gout, and said that in the traditionary acceptation of the term it meant a specific arthritis, characterized by the deposit of uric acid salts in the affected joint; that, as a diathesis, it meant an accumulation of acid salts resulting from increased formation or defective secretion of the products of proteid metamorphosis. According to recent investigations, it would seem that the liver is an important factor both in the metamorphosis of the carbo-hydrates and in the formation or the arrest of urea. Certain facts seemed to point strongly towards a common origin for glycosuria and gout and the lithæmic habit. Dr. Draper referred to the chemical theory regarding the causation of gout and its allied disorders, that they are diseases of suboxidation, and, while a number of facts seemed to go to support it, the question was, however, involved in much obscurity. Again, gout is often attended by many symptoms of a nervous character, which led many to regard it as an affection belonging among the neuroses. He did not think it was possible to say at the present time that gout is a neurosis dependent upon some chemical process, or that it is primarily a chemical process determined by some neurosis. The treatment of the disease based upon the theory that it is a neurosis is more successful in the cases of acute joint-lesions, while that based upon the theory that it is due to suboxidation of food is most successful when directed against the constitutional vice. Considerations of the chemical theory of gout, or of the theory that it is a neurosis, did not necessarily invalidate the humoral theory of the affection.

The treatment of the gouty dyscrasia involved, primarily, complete combustion of food, of whatever character taken, and this was to be secured partly by the observance of dietetic rules, and partly by hygienic and medicinal treatment. With regard to the first, dietetic rules, regard must be had to the quantity and the quality of the food best adapted to maintain health and nutrition. The quantity of food to be taken could be arrived at only approximately. It varies according to the age of the patient, his surroundings, etc. Excess of food might be absolute or relative, in the first case being more than was required, and in the second case more than could be assimilated. The relation of the quantity of food in the production of the gouty diathesis is perhaps more important than that of quality. For the production of heat, farinaceous, oleaginous, and saccharine foods are especially indicated, while a nitrogenous diet is best adapted to the maintenance of health in

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persons pursuing a mental occupation and who require but a small amount of animal heat. With regard to hygienic treatment, it embraces an abundant supply of oxygen; and with regard to medicinal treatment, drugs should be given which facilitate oxidation, etc.

Speaking more especially of the kind of food best accepted by patients with the gouty dyscrasia, he said they are usually better able to digest foods of a nitrogenous nature than of a non-nitrogenous; that these patients have limited power in the assimilation of carbohydrates; and with regard to restriction of diet, it should be first with reference to sugars, especially sugars about to undergo fermentation; second, farinaceous foods; and, third, fats. He had not found the uric acid theory of gout supported by clinical facts. Fermented preparations of alcohol should be avoided; beer should be entirely prohibited, as should also sherry, madeira, and port wine, and the less wine in general the better. Milk could usually be taken with much benefit by patients suffering from lithæmia; and most vegetables, especially those containing a minimum of starchy elements, could be used with safety.

DISCUSSION.

Dr. HADDEN had used very much the same line of treatment in the cases of gouty diathesis which had come under his observation during the past five years as that recommended by the author of the paper. Benefit had been derived from a diet composed pretty exclusively of nitrogenous food, especially in cases of a subacute and chronic nature. This plan of treatment, cutting off as far as possible saccharine and starchy foods, had been attended by a diminution of the urates in the blood and in the urine. Reference was made to the investigations upon birds in captivity and those in a wild state with regard to the presence of uric acid salts.

Dr. PUTNAM JACOBI thought the theory of suboxidation, as brought forward by Dr. Draper, was very interesting and quite true; yet it was no less true that the mere statement that substances did not act through their normal term of oxidation is not an explanation of this fact, or at least does not express in a word the influence of heredity upon the various manifestations of gout which present themselves. Reference was made to the experiments of Pettenkofer and Voigt, who had shown that the amount of oxygen taken up in the blood was in proportion to the amount of albumen stored up in the tissues. She said it was quite certain that the source of uric acid was by no means to be found in the incomplete development of urea. There was no constant relation between the excess of uric acid and deficiency of urea. She referred to the case of a patient in whom the gouty diathesis existed, and who suffered from profound hypochondriasis, verging on insanity; yet no lithates or quantitative excess of uric acid could be found in the urine. She was cured by an exclusively milk diet. She confirmed the testimony of Dr. Hadden with regard to the benefit derived from the meat diet, but stated that it was difficult to induce the patient to carry it out fully.

Dr. PIFFARD said that seven or eight years ago he read a paper in which he gave utterance to nearly the same views which the author of the paper had expressed this evening, and also at about the same time when the paper just referred to was read,—viz., that gout is due largely to failure of complete oxidation of the peptones, which led to the formation of certain acids. He referred to the evil influence which he believed to be exerted specially by the wines and beer in the manufacture of which glucose was employed.

Dr. KINNICUTT spoke of the intimate relation existing between lithæmia and diabetes, and added his testimony to the experience related by Dr. Draper.

Dr. JANEWAY referred to the fact that while a purely nitrogenous diet had been recommended, it was also true that milk had been spoken of most favorably, which was well known to contain a considerable proportion of sugar,—sugar, too, which would admit of acid fermentation. It seemed to him that in the management of gouty patients the principal point was to avoid dyspeptic occurrences. This was sometimes accomplished best by a nitrogenous diet, while in other cases the reverse was indicated. If the neural pathology was to be accepted, he thought we should see gouty deposits much more frequently than we do among the numerous nervous patients with whom we all had to deal. According to his observation, however, gout was not of so frequent occurrence among nervous patients. When it did occur after some nervous phenomena, it was more likely to be due to the dyspeptic condition to which this had given rise than to the nervous affection primarily. He was more inclined to accept the humoral theory of the affection than that of the neural.

THE PRESIDENT said it had seemed to him that every case of gout was a problem by itself, dependent not only upon the hereditary tendencies, but also upon the habits and surroundings, of the patient, and that certain idiosyncrasies existed which made it impossible to lay down any special plan of treatment which would be adapted to all cases. For instance, there were gouty patients in whom a single strawberry would bring on an attack, in others a slice of watermelon would do it, and in others still, the least amount of roast meat; some could not take wine or malt liquors, while they might be able to take whiskey; etc. He thought there was danger in trying to generalize and deduce any general law applicable in the treatment of all cases alike.

Dr. FLINT was not prepared to offer any

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opinion at present concerning a comparatively exclusive nitrogenous diet. He believed we must go to clinical observations to settle many of these questions, and that a sufficient number of cases should be treated according to this or that plan before any general conclusions were drawn. He should feel doubtful about accepting any views concerning the neurology or the chemistry theory of the affection. There are few diseases in which heredity is so manifest as in gout, and it is a disease which, as a rule, is only developed after a certain period of life has been reached. There are differences in persons concerning the existence of the dyscrasia. These were some of the facts which should not be overlooked in investigations regarding the gouty dyscrasia.

In closing the discussion, Dr. DRAPER said he had rarely found it necessary to restrict the patient to an exclusively nitrogenous diet; but when it seemed necessary to do so, the patient was usually more or less rebellious. He agreed with Dr. Flint's remarks with regard to the necessity for extensive clinical observation in order to draw sound general conclusions. He had found by experience that an animal diet agreed with the majority of gouty patients, and yet he was unable to explain why this was so; nor was he able to explain the idiosyncrasies which the patients had manifested to whom Dr. Barker had alluded. Every physician doubtless had seen similar cases. He could not agree with Dr. Janeway that the disease seldom manifested itself in nervous patients. It might not be manifest in arthritic lesions, but he thought we were often led to wrong conclusions in supposing that gout did not exist on account of the absence of the arthritic affection.

The Academy adjourned.

GLEANINGS FROM EXCHANGES.

MANGANESE IN THE TREATMENT OF AMENORRHŒA.—In a short communication to the *Lancet* (January 6), Drs. Sydney Ringer and William Murrell recommend permanganate of potash in the treatment of amenorrhœa, giving it in solution (P. Br.), or preferably in the form of a pill containing one grain, of which one or two may be administered three or four times a day. Their observations extended over a period of thirteen months and were made on sixty-nine cases. The most striking results have been obtained from the larger doses, a large one sometimes succeeding admirably after the failure of a smaller one. The remedy was given alone, and without anything in the way of accessory treatment.

The best results were obtained in young women from eighteen to twenty-five, who from some accidental cause, such as getting wet or catching cold, have missed once or twice after having been regular, the menses usually appearing after a few doses. The remedy should be pushed just before the expected period, but may be continued for months without injury. In anæmic patients, where scanty menses or even amenorrhœa is present, the permanganate pills will usually bring on the discharge. That it does so directly, and not through its secondary effect or merely because of the action of the manganese in improving the blood, is shown by the fact that, although menstruation is re-established, the general state of anæmia itself is not much, if at all, affected by it. It is equally valuable in the anæmic and the plethoric. The beneficial effects in restoring the menstrual flow are not manifested in young women only, but are equally evident in cases of delayed menstruation after delivery in multiparæ. Some patients complain of pain in the stomach after taking the pills.

The authors have also given manganate of sodium and binoxide of manganese, in the same doses, in amenorrhœa, with equal success. The effective agent in the treatment is, therefore, the manganese.

[On account of the powerful oxidizing action of the permanganate, it is perhaps advisable to swallow some food before taking the pills.]

PHYSIOLOGICAL ACTION OF CURARA.—It is known that curara may cause slight symptoms of excitation before the paralysis comes on. M. Gouty has succeeded in isolating these symptoms by employing feeble extracts of *Strychnos triplinervia*, or small doses of certain native preparations. By these means, in dogs, a new phase of intoxication may be presented for ten or even twenty minutes. In the first instance the animal is agitated, jumping, scratching, barking, as if in a state of general hyperæsthesia. Then it presents half-choreic shocks or tremors; the pupils dilate, and are alternately dilated and contracted. The heart's action is increased or diminished in frequency; sometimes there is vomiting, micturition, or defecation; and there is always salivation. Finally, the central and peripheral temperatures are raised, and the excitability of the muscles and nerves becomes highly increased. With the native preparation of curara it is impossible to prolong this stage, and symptoms of paralysis soon become associated with those of excitement. The choreic shocks were found to be arrested by section of the sciatic nerve. Other experiments proved that the spasms originated from the spinal cord and were influenced by its preceding functional condition. If the cord was tied in the mid-dorsal region, and the curara injected, the spasms were still produced in the hind legs; but if, after the operation, the excitability of the posterior segment became lowered, the spasm was no longer produced in the hind legs. This dependence on a perfect functional

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activity is a point of difference of these spasms from those produced by strychnine and by asphyxia. The action of small doses of curara is not, however, limited to the spinal cord. The diminished frequency of the heart continues after section of the pneumogastrics, and will even occur if the pneumogastrics have been previously divided. From these facts it seems that curara must not be regarded as entirely destitute of a "convulsivant" action, or of an action on the central nervous system.—*Lancet.*

ON THE THERAPEUTIC VALUE OF SULPHUROUS ACID IN SCARLATINA MALIGNA.—Dr. Keith Norman Macdonald, after denying the prevalent opinion that no reliance can be placed on any drug in cases of scarlatina, does not hesitate to affirm that, when properly applied, both locally and internally, sulphurous acid is by far the most efficacious remedy we possess. He continues, "I have had several opportunities of testing its efficacy in some of the worst cases I have ever seen, during the epidemic which has been rife in this town (Cupar Fife) for the last two months, and I am bound to say that, of all remedial measures in this disease, it is, in my opinion, the most reliable. My treatment is as follows. The moment the throat begins to become affected, I administer to a child, say of about six years of age, ten minims of the sulphurous acid, with a small quantity of glycerin, in water, every two hours, and I direct the sulphurous acid spray to be applied every three hours to the fauces for a few minutes at a time, by using the pure acid, in severe cases, or equal parts of the acid and water, according to the severity of the case. Sulphur should also be burned in the sick-chamber half a dozen times a day, by placing flour of sulphur upon a red-hot cinder and diffusing the sulphurous acid vapor through the room until the atmosphere begins to become unpleasant to breathe.

"In the worst cases, where medicine cannot be swallowed, this and the spray must be entirely relied upon; and the dark sordes which collect upon the teeth and lips should be frequently laved with a solution of the liquor potass. permanganatis, of the strength of about one drachm [of the solution] to six ounces of water, some of which should be swallowed, if possible.

"In cases presenting a diphtheritic character, the tincture of perchloride of iron should be administered in rather large doses in a separate mixture with chlorate of potash, and equal parts of the same with glycerin should be applied locally with a camel's-hair brush several times in the day; but, as in the majority of cases among children it is next to impossible to use a local application more than once, the spray and permanganate solution will then prove of great service."—*British Medical Journal.*

INDIAN ENTERIC FEVER.—Dr. R. H. Quill, Surgeon to the Army Medical Department, gives the result of an examination of the annual returns of the sick and wounded troops at Assirgarh, Central India, from 1875 to 1881. The station is completely isolated, and the conservancy carried out by the "dry-earth system." The contents of the latrines are emptied into a ravine two hundred yards from the station, twice daily. The drinking-water is carefully filtered. Every precaution is taken to avoid exposure to fecal impurity. During the period just mentioned, not one single case of enteric fever occurred among the troops. The believers in the climatic origin of cases of enteric fever in India very correctly point out that the principal victims of this fever are young soldiers, with little Indian service, and that the older men, with an Indian service of four or more years, are rarely sufferers from it. Without gainsaying this observation, or attempting to account for it, Dr. Quill would simply say that, for a space of five years, Assirgarh has been occupied by successive batches of young and unseasoned soldiers without the occurrence among them of any type of fever other than the mildest form of ague. The climate of Assirgarh is no better than that of many other stations in the Bombay Presidency, where enteric fever is of only too frequent occurrence; but its isolated situation, and the nature of its surroundings, lessen to a very great extent its liability to fecal contamination of any sort; and herein lies the reason for the immunity it enjoys from the presence of enteric fever.—*British Medical Journal.*

THE IMMEDIATE REMOVAL OF THE SECUNDINES AFTER ABORTION.—Dr. Paul F. Mundé, in a contribution to the *American Journal of Obstetrics* for February, expresses the opinion that "*the future safety of the patient demands that the secundines should be at once removed after expulsion of the fœtus, in every case of abortion in which such removal can be accomplished without force sufficient to injure the woman.*" He condemns without reserve the let-alone policy or the expectant treatment, and urges manual and instrumental interference as soon as the fœtus has been expelled. When retained, the secundines are a fruitful source of trouble, in keeping up hemorrhage and inducing septicæmia, and the safety of the patient can only be secured by their early removal. The operation, however, is not entirely free from danger in unskilled hands, and is, therefore, to be performed with care: usually it only requires the fingers and dull curette, but in more difficult cases the placental forceps are recommended, aided by the Sims speculum and anæsthesia. A table of fifty-seven cases is appended, in which the author demonstrates from his own experience that the danger has been greatly exaggerated, he having lost of these only two cases (sep-

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ticæmia and cellulitis), both of which may as well be attributed to the putrescent state of the membranes as to the efforts for their removal, as the symptoms of blood-poisoning had existed prior to the operation.

GLANDERS.—In examining microscopically, in the Imperial Health Office, Berlin, sections from the cadaver of a horse killed on account of glanders, Dr. Löffler and Professor Schütz discovered a delicate rod about the size of a tubercle bacillus. This they cultivated, until the cultivation had been carried through four generations. From this fourth generation of purely cultivated bacilli, a small quantity was inoculated into the nasal mucous membrane and into the shoulder of a healthy old horse. The animal began to be very feverish forty-eight hours afterwards, and at the point of inoculation ulcers developed, from which knotted lymphatic cords could be felt running to the tracheal and withers glands, so that in about eight days the horse presented all the appearances of a typical case of glanders. The bacillus was found in the diseased structures after death. Several repetitions of the experiment yielded similar results.

TREATMENT OF EPILEPSY BY CURARA.—The favorable report of Künze (*Neurolog. Centralbl.*, January, 1882) of thirty-five cases of epilepsy, with completely successful results in twenty-five per cent., incited Prof. Edlesfen to investigate this method. The formula used was—curara, 0.5 gr.; aq. dest., 5.0 gr.; acid. hydr. chlorii, gtt. j.; M., digere per xxiv horas, dein filtra. Of this, one-third is to be injected hypodermically every five days. No bad symptoms were observed after its use. Out of thirteen cases of true epilepsy three were permanently cured, three others were distinctly improved, six were not benefited, one still under operation promised well.—*Dublin Journal of Medical Science.*

CHINOLIN IN DIPHTHERIA.—Excellent results have been described by Seifert in the treatment of diphtheria by chinolin (*Berlin. Klin. Wochenschrift*, No. 22). In a series of cases, slight and severe, of diphtheria in adults, and in a smaller number of cases in children, the only case of death was that of a child, a year and a half old, rickety, ill nourished, and the subject of constitutional syphilis. Instead of the unpleasant tartrate of chinolin hitherto used, Seifert prefers a five-per-cent. solution of pure chinolin in equal parts of alcohol and water as a local application, and a one-fifth-per-cent. solution in water, with a little spirit and peppermint, as a gargle. The stronger solution was applied with a brush from once to four times daily, and a new brush used for each spot painted, those once used being destroyed by fire. Immediately after the application the patient feels a burning, smarting pain, which is soon removed by a little cold water and gives place to a feeling of great relief, so that swallowing becomes easy, although before it was impossible; the fœtor speedily ceases, the membranes come away in slight cases within twenty-four hours, the glandular swelling quickly subsides, and the temperature rapidly falls to the normal. The only other treatment adopted was an ice cravat in severe cases.—*Lancet.*

THE PRACTICAL APPLICATION OF SPONGE-GRAFTING.—Dr. Hamilton has contributed a note to the *British Medical Journal* (January 6) with regard to his subsequent experience with sponge-grafting since the publication of his original paper. He has found that this plan of promoting the healing of deep wounds or ulcers is best carried out by using thin layers of sponge, not thick enough to interfere with drainage. One of these is applied with some pressure over the granulating surface, than which it should be somewhat smaller, so that it will not quite reach to the young epithelial border, otherwise it may be undermined at the periphery. As soon as this sheet of sponge has been appropriated by the granulations, another is superadded, so as gradually to build up the wound. He has found the freezing microtome of the proper size to furnish the best way of obtaining these sections of sponge.

When the ulcer or wound is in the lower extremity, he recommends moderate exercise, in order to favor the turgidity of the capillary loops and increase their functional activity, so as to stimulate the granulating process and favor the healing of the wound.

THE authorities in Russia are evidently not in favor of the medical education of women. The lecture-courses at St. Petersburg have been closed, by order of the Emperor, after an existence of ten years. The government has deprived the institution of its buildings, and maintains that the institution had not sufficient means to carry it on properly. Subscriptions were promised, but every obstacle was thrown in the way of their collection. The experiment of female practitioners has evidently been a failure in that country at least.

THE CHOLERA.—The report telegraphed to Madrid by the Spanish Consul at Suez, stating that cholera was raging among the pilgrims on the road between Medina and Mecca and that there was great mortality at the former place, is discredited at Alexandria. The Sanitary Commission has no knowledge of the reported outbreak; but an order has been sent to enforce strict quarantine at Moses's Wells. Reports of the same tenor were received during November, but it is declared that there are now no more pilgrims at Mecca or Medina.—*British Medical Journal.*

REDNESS OF CARBOLIC ACID.—A. Sicha confirms Fabini's assertion that the liability of

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phenol to turn pink arises from the presence of copper. Phenol, which he prepared by distilling entirely from glass vessels, remained white for months in the sunlight; but when to fifty grammes of this phenol ten drops of a solution of copper sulphate (one to four hundred) were added, the pink color was formed after six days, and in two months became very intense.—*Journ. Soc. Chem. Ind.*

SULPHURATED CAMPHOR LOTION.—The use of a formula of this description is often indicated in skin diseases, especially in pimples on the face. The following combination of M. Vigier's is much used in the Hôpital Saint-Louis:

℞	Aquæ rosæ,	250 gm.
	Spt. camphoræ,	30 "
	Sulphur. præcipitat.,	20 "
	Pulv. acaciæ,	8 "

M. secundum artem.

ERGOT IN ACUTE SUPPURATIVE ARTHRITIS.—At the recent session of the French Association for the Advancement of Science, Dr. De Musgrave-Clay reported a case of suppurative inflammation of the elbow-joint treated with large doses of the fluid extract of ergot, the arm being kept upon a splint. The patient was only 6 years of age. Rapid diminution of heat, pain, and suppuration ensued, and a recovery with a useful joint rapidly occurred.

TETANUS FOLLOWING HYPODERMIC INJECTIONS OF MORPHIA.—A case is reported by Dr. W. A. Ross (*Michigan Med. News*, November 10) of Fräulein L., 40 years of age, who was admitted into a hospital at Stuttgart, suffering with tetanus. Her health had been poor, she was anæmic, and had been under treatment for dyspepsia in this same hospital, from which she had been discharged only the day before her attack. The only assignable cause ascertained for the disease was the punctures resulting from the hypodermic needle, she having been addicted to the use of morphia by this method, and her arms showing many recent wounds as the result. Death occurred on the sixth day, partial relief having been obtained for a few days from the use of curara.

MISCELLANY.

MUSK-RAT.—This American product is not in need of protection by tariff, but the high price of true musk seems to bring it, the native article, in demand. Fortunately, the breeding qualities of the animal are so great that extermination is impossible. Hundreds of acres of land right on the borders of New York, it is said, cannot be reclaimed because it is impossible to prevent the ravages of the *Fiber zibethicus*. In case of war with Holland, all that would be necessary would be to send a moderate schooner-load of these industrious rodents to that country, and it would be drowned out of a certainty. The musk-like secretion is contained in a gland of the size of a small pea near the sexual organs. For the manufacture of fine soaps, this American musk is said to be invaluable, since it is almost as good, and goes as far, as genuine musk; besides, its strong odor is rendered mild by the alkali in the soap. If used for perfuming soaps, some time is required to improve and develop the odor. After a block of soap, perfumed with rat-musk, has been allowed to lie for a few months, only a very fine connoisseur can recognize the difference in odor from genuine musk.

IMPORTANT discoveries have been made in British Guiana of two species of india-rubber-yielding trees of a character which insures their future profit to the colony. One is known to the aborigines by the name of *hatie*. It is about sixty feet high, with a trunk-diameter of twenty inches, and is found on the alluvial, oft-flooded lands on the creeks and banks of the lower parts of the rivers, where in places it is abundant. The second is not scientifically known, as flowering specimens of it have not yet been obtained. It is one of the largest trees of a forest flora peculiarly rich in large types. The trunk is four or five feet in diameter, and runs up straight sixty or seventy feet unbranched, above which the head extends many feet more. On its discovery, recently, a few branchlets could only be obtained by shooting them off with large shot. The bark is thick and wonderfully rich in milk of excellent quality, and the elasticity and tenacity of the rubber seem to be unsurpassed.

HOSPITAL FOR CHILDREN'S CONTAGIOUS DISEASES IN NEW YORK.—Dr. A. Jacobi, in his annual address as President of the New York State Medical Society in 1882, advocated the establishment of a special children's hospital for contagious diseases on Manhattan Island, and the subject was referred to a committee to secure the necessary legislation. This committee reported at the recent meeting that a grant of fifty thousand dollars, and a building-site at the foot of Sixteenth Street, New York City, had been contributed by the city authorities. The building will be pushed ahead rapidly during the spring and summer, and will accommodate from forty to sixty patients.

THE COLLECTIVE INVESTIGATION COMMITTEE of the British Medical Association, suggested in Prof. Humphry's address in 1880, is now in active operation; sub-committees have been formed, with local secretaries, in the various districts, and the work has been taken up in an encouraging and enthusiastic manner. Inquiries have been prepared concerning acute pneumonia, chorea, and acute rheumatism;

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those on diphtheria, syphilis, and the contagiousness of pulmonary phthisis will be pushed forward this year, and will doubtless elicit some valuable and interesting results.

THE WATER-CLOSET'S DOOM.—An ingenious German has invented a plan for the manufacture of gas from human fæces. These are decomposed in a retort by heat, the chief products being a light-yielding gas, carbonic acid, tar, oil, and ammonia. As in ordinary gas-works, the tar and oil are separated, and the light-yielding gas purified for use. There remain in the retorts the ash-constituents with a portion of carbon, which the inventor designates coke. The authority for this description, *Der Techniker*, informs its readers also that a Breslau hotel has already been successfully lighted by means of this novel and presumably economical gas.

BORDEAUX RED, A NEW WINE COLOR.—A new red substance that has been introduced for coloring wines, under the name of Bordeaux red, or *Rouge végétal*, has been analyzed by Guichard, who reports (*Jour. de Pharm.*) that it is a naphthaline dye. It is said that one gramme (fifteen grains) is sufficient to color five litres of wine a deep red (three grains to the quart). For the detection of this dye in wine, Thomas makes use of its action towards silk and ammonia. It dyes the silk a granite red, and is turned brown by ammonia.—*Polytech. Notizblatt.*

A DEATH FROM THE DICHLORIDE OF ETHIDENE occurred at the Liverpool Eye and Ear Infirmary recently, in a man 26 years of age, who sought relief from a piece of steel which had flown into his eye and penetrated the lens only half an hour before. The same issue of the *British Medical Journal* which gives an account of this case also reports another death from chloroform, this time in a child only 5 years of age. She had taken it twice before without bad symptoms.

"GOOD TEMPLARS' SPARKLING CHAMPAGNE," largely sold for the use of teetotallers in England, has been recently analyzed, and found to contain twenty-five per cent. of proof spirit. Of three samples of "non-alcoholic" sacramental wine analyzed, one contained eighteen per cent. of proof spirit, another ten per cent., while the third was as represented.—*Canadian Pharmacist.*

GERMAN EYE AND EAR INFIRMARY.—In the year 1882 there were gratuitously treated at the German Eye and Ear Dispensary, 314 Noble Street, 1516 patients, of which number 1028 were for eye diseases and 488 for ear diseases. The number of important operations performed in the institute was 135, of minor, 175. Surgeon in charge, Dr. M. Landesberg.

APPLICATIONS FOR CHILBLAIN have been recommended (*New Remedies*) as follows. Where the skin is broken, yellow wax fifteen parts, rape oil fifty parts, yolk of egg one part, acetate of lead five parts. Where the skin is unbroken, tincture of iodine two parts, ether fifteen parts, collodion fifty parts. Carbolized cosmoline is also a good application to relieve the burning and itching.

THE THIRTY-FOURTH ANNUAL SESSION of the State Medical Society will be held at Norristown, Wednesday, May 9, 1883, at ten A.M. All who desire to present papers at this session should send the title, and time required for reading the same, to Dr. J O. Knipe, Chairman Committee on Programme, without delay.

W. B. ATKINSON,
Permanent Secretary.

SPIRIT OF TURPENTINE is now made from sawdust and refuse of the saw-mill. It is extracted by a sweating process, and yields, per cord, fourteen gallons of spirit, three or four gallons of resin, and a quantity of tar. The spirit produced has a different odor from that produced by distillation.—*Oil, Paint, and Drug Reporter.*

REGULATION OF PROSTITUTION is to be tested again in Cleveland. Weekly examination of the women in the brothels is to be practised, and women found to be diseased are to be sent to a special hospital and cared for at the expense of the proprietor or owner of the property.

NOTES AND QUERIES.

TO THE EDITOR OF THE MEDICAL TIMES:

SIR,—The picture of a medical man "befouling his own nest" is not an edifying spectacle.

As it does not appear that the Surgeon-General of the Navy either asked for or desired a transfer of the Marine Hospital Corps to his department, Dr. Hamilton's uncalled-for onslaught on medical officers is an insult to the profession and disgraceful to the service he represents. No man with a particle of fine feeling or *esprit de corps* is ever guilty of making egotistical comparisons for the sake of bolstering up his own reputation at the expense of others; nor should an officer vent his spleen upon the National Board of Health or a naval bureau by washing the professional linen in public, as an advertisement for himself and his department. No wonder the profession is looked down upon by politicians, when its dignity is thus prostituted. C.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY FROM FEBRUARY 17, 1883, TO MARCH 3, 1883.

BURTON, HENRY G., CAPTAIN AND ASSISTANT-SURGEON.—The leave of absence granted October 2, 1882, is extended two months. Paragraph 2, S. O. 49, A. G. O., February 28, 1883.

CLEARY, PETER J. A., CAPTAIN AND ASSISTANT-SURGEON.—Granted leave of absence for four months on account of sickness, to take effect January 3, 1883, in extension of his authorized absence on certificates of disability. Paragraph 6, S. O. No. 40, A. G. O., February 16, 1883.

HEIZMANN, CHARLES L., CAPTAIN AND ASSISTANT-SURGEON.—To be relieved from duty in the Department of the Columbia. S. O. 12, Department of the Columbia, February 8, 1883.

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PHILADELPHIA, MARCH 24, 1883.

ORIGINAL LECTURES.

CLINICAL LECTURE

ON CHLORAL-POISONING, ACUTE AND CHRONIC.

Delivered January 13, 1883, at the Pennsylvania Hospital,

BY J. M. DA COSTA, M.D.

(Specially reported for the *Medical Times*.)

GENTLEMEN,—This is a case which, if you had seen it a few days ago, you would not have given much for his chances of recovery. He was brought here in a truly desperate condition; but now he seems to be entirely well, and is going home to-day.

His name is C.; he is 45 years of age. This is all we could learn when he was admitted, January 9, except that he had come to this city to enter the Franklin Reformatory Home, where he remained a few hours, ate his dinner, and then fell into a stupor from which he could not be roused. He was sent here, on the same evening, with the idea that he had taken some narcotic poison. We have since obtained from him the following statement. He had an attack of acute rheumatism while in the army in 1865, and has been subject to joint-pains at intervals since that time. About four weeks before admission, or about December 9, he was seized with pain and inflammation in all his large joints, which crippled him, but did not keep him in bed. He used trimethylamine, alkalies, and salicylic acid without relief, and finally took thirty grains of chloral at night, to enable him to sleep, and continued this for some weeks. Believing that a little rest and change of surroundings would do him good, he decided to stay for a week or two at the Franklin Home, and left his home in New Jersey for this purpose about eight o'clock on the day of admission. He still had some joint-pains, and to relieve them he purchased an ounce of crystallized chloral hydrate, which he was able to do, being himself a physician. In the afternoon he swallowed some of the drug, without weighing it, and the result was that he was deeply narcotized: he probably took, within an hour, about six drachms of chloral hydrate, and, fearing this would not be enough, he also took half a grain of cannabis Indica extract. As a result of this, he lost consciousness, and became comatose, in which condition he came under our care shortly afterwards. As regards the nature of the case, it is evident: the man, being in the habit of taking chloral, takes six drachms in the course of an hour or so in the afternoon, and is brought into the hospital directly afterwards with the symptoms of chloral-poisoning. He was completely narcotized, and his muscular system was perfectly relaxed. His temperature was normal. Pulse rapid, 140, quite weak, and compressible. Respiration noisy and stertorous, 28 in the minute. The pupils were at first contracted, afterwards dilated, afterwards again contracted; they were mobile, though sluggish, and responded poorly to the light; they were changeable, though for the most part contracted. The urine drawn by the catheter contained no albumen and no sugar,—I beg you to remember this,—but it did contain a small amount of alcohol. The bowels were moderately loose; but you must not pay much attention to this, for he had been long subject to chronic diarrhœa. On questioning him upon the subject, it was ascertained that he had taken a glass of whiskey on leaving home in the morning, about eight o'clock, but it was not more than an ounce, he says: this, however, would hardly be sufficient to account for the presence of alcohol in the urine nearly twelve hours afterwards.

When he came into the house, his was a very unpromising case. There were muscular contractions upon using the battery, but no appearance of pain was called forth even by strong faradic currents. Artificial respiration was kept up when the breathing failed, inhalations of ammonia were given, and electricity steadily applied, until the patient revived and became conscious. His stomach was emptied with the stomach-pump, although I do not attach much importance to this, for the chloral by that time was probably absorbed; but still it was the proper method of treatment in case there was some remaining to get rid of. We did not trust to this, however, but gave him carbonate of ammonium; and the next morning, when I saw him for the first time, he was ordered strychnia (one-sixtieth of a grain), given hypodermically every third hour. The pupils were now moderately dilated, but responded a little to light. The muscles were relaxed. The impulse

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of the heart was feeble, and the pulse was feeble. The patellar tendon reflex phenomena were very much reduced. Sensation was now normal. He recovered rapidly, and, in fact, commenced to improve visibly about four hours after beginning with the strychnia. He had taken three doses of the strychnia, and was doing very well, when he was detected the next day in taking another dose of chloral from a paper which he had had concealed in his pocket. He swallowed half of its contents; the remaining quantity was taken from him. It was found to be pure chloral hydrate crystallized, and weighed sixty grains. This was all that was left from the ounce; consequently he must have swallowed seven drachms in all. The last dose of about a drachm again caused unconsciousness, which lasted about four hours. The pulse was very feeble and compressible; the extremities were not cold. The symptoms were the same in character, although not nearly so marked, as on the day before.

Gentlemen, we have here a case of chloral-poisoning. Let us examine into his present state, and I will then make some remarks upon chloral and cases of poisoning by it. His pulse is still feeble, though stronger than it has been. It is now ninety in the minute. The heart-sounds also are much stronger than they were, but the first is still comparatively weak, though nothing like the feeble heart-sounds (particularly the first sound) which were observed on admission. His pupils are not so much dilated as they were, but the slight inequality noticed before persists: this may be natural to him. The urine was examined again yesterday, but it contained no albumen and no sugar; it is passed in sufficient quantity. The sensation in his hands has returned perfectly, and he is beginning to suffer again with rheumatic pains. Let us test the tendon reflex. This I find to be very good at the knee, so that this also has come back. Except in one respect,—the weakness of the circulation,—he shows no longer any evidences of his recent experience. His tongue, however, is still very much coated. Since yesterday he has been taking tincture of gentian and nux vomica; his diet has been regulated, and the bowels have been kept open by purgatives when needed.

How did we know that this man had been drinking on the day of admission? We tested the urine for alcohol by a test adapted by Dr. Woodbury: it is a modification of Ainstie's test. Into a tube containing a gram of white sulphuric acid pour twice as much of the urine to be tested, so as to overlay the acid. Now drop in a small clean crystal of potassium bichromate, and slowly mix the liquids by rotary motion of the test-tube. If alcohol is present in proportion as large as two or three parts per thousand, a permanent green discoloration of the liquids will result; if there is less than this, the liquids will remain of a ruby color. I might add that Dr. Woodbury informs me that the presence of chloral in the urine will not produce this peculiar reaction. There was very little alcohol found in this case, and I merely mention it in passing; the real point of interest is the chloral-poisoning.

Now, this man, you recall, took fully seven drachms of chloral. He presented the typical symptoms: unconsciousness, relaxed muscles, extremely feeble pulse, and weakened heart-sounds. The pupils were at first contracted, afterwards dilated, but always sluggish; there was a disappearance of the reflex tendon phenomena. He had, in fact, all those symptoms which are peculiar to a case of chloral-poisoning except one: he had not what has been spoken of by some authors as commonly accompanying such cases,—he had no sugar in his urine.

What are the remedies to be employed in acute chloral-poisoning? They are especially those designed (1) to sustain the action of the heart, such as ammonia and brandy; (2) to keep up the breathing by artificial respiration, if needed; (3) to keep the patient warm; and (4) to use electricity as a cutaneous stimulant. Thus far you would treat a case as an ordinary one of narcotic poisoning. But is there any remedy that will counteract the depressing effects of the chloral upon the nervous centres, and particularly the respiratory centre? Yes; the remedy for this purpose is strychnia, which antagonizes the chloral. It may be used as we gave it here, hypodermically, one-sixtieth of a grain every three hours at first; and it would have been given oftener, but it was not needed. Strychnia, therefore, is indicated as the physiological antidote: it stimulates the centres which have been depressed by the chloral. When recovery takes place, it is usually rapid.

A few words on the subject of chronic

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chloral-poisoning may be of interest in connection with the case before you and the remarks which have just been made.

Since the introduction of this valuable but seductive remedy, the people have gradually learned that chloral produces sleep and relieves the condition of "nervousness" or restlessness that is so commonly a cause of insomnia, and they now resort to it just as they do to opium to get relief from any inconvenience. In this way they form a chloral habit that may be as injurious as the opium habit. Chloral, when it is thus taken for a length of time in ordinary or small doses, will give rise to peculiar symptoms, which you should be able to recognize. These symptoms, as you may infer from the acute case before you, are principally those indicating disorder of the nervous system and the circulatory apparatus. As these features are peculiar and of general interest, I will discuss a few of them with you. First, let us consider this question: Can a man become habituated to the use of chloral as he may to the use of morphia?

Take our case for an illustration. This man had used it during his sickness, and had since continued its use, but, as he has told us, he required constantly increasing doses. Is this the rule? There is a good deal of difference of opinion among observers, and, I think, a great deal of difference, in this regard, in individuals. It has been my experience to find in some people great susceptibility to chloral, which does not pass away. Some persons are always affected by small doses, while others require the amount given to be increased in order to keep up the effect, until enormous doses are used. One case I recall,—that of a gentleman who, during some temporary sickness, was ordered chloral by his physician in doses of twenty grains once or twice during the night. He took it, and obtained much relief. The physician discontinued his visits, and, indeed, forgot about the remedy he had administered. About six months afterwards he was again called to see the case, and was astonished to find his patient suffering with all the symptoms of delirium tremens. It was difficult for him to account for the delirium tremens, for the patient was not of intemperate habits, and had not been for years. Upon searching for the cause of this unfortunate condition, it was learned that the gentleman, partly through carelessness and partly from a desire to sleep pleasantly, had been accustomed to use the remedy every night in order to relieve restlessness and produce sleep; but, instead of confining himself to the prescribed dose, he had increased it until he was taking from eight to twelve times the quantity ordered. Under proper care, however, he rapidly recovered. This case, as I told you, wound up as a typical case of delirium tremens, and it answers the question: in some persons the system becomes habituated to the use of larger and larger doses of chloral, the smaller doses failing to produce the desired effects.

Among the more striking features of chronic chloralism is muscular weakness; this is particularly manifested in the legs. There is such marked debility that in attempting to walk the patient appears to be paralyzed. There is no special group of muscles that is affected, but there is a general loss of power in the limbs; this paresis may manifest itself also in the upper extremities. As regards other symptoms, there are some in connection with the circulation and nervous system which deserve discussion. There is feeble action of the heart, with cold extremities and a tendency to profuse sweating; the pulse is accelerated, but weak; arterial tension is reduced.

The nervous phenomena are very remarkable. The active delirium, like that of alcohol, has been mentioned; but there is also a less marked condition of the mind, which is even more significant. The patient becomes constantly dull, dreamy; the will-power seems completely wanting; the judgment and intellectual faculties are impaired. The vaso-motor centres lose to a certain extent their functional powers; this is partly shown by the condition of the cutaneous circulation; the extremities become cold and blue; there is also a strange tendency to cutaneous eruptions. I have noticed erythematous blushes come and go with great rapidity. I have also seen papular eruptions, more or less red and itching, not always the same. Therefore, in addition to the alteration in secretions, the perspiration already referred to, we may have various inflammations of the skin as a result of chronic chloral-poisoning. I have already mentioned the fact that sugar may appear in the urine, although it is not constant; at

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least I cannot say that I have found it so. In some cases the bodily nutrition is well maintained and the appetite remains good; the contrary is the case in others. The digestion is not materially influenced, except that there may be relaxation of the bowels, in place of the constipation accompanying opium and its preparations.

What should be the treatment of chronic chloral cases? Suppose that a patient like this says that the habit is growing upon him, and comes to you for advice, what course would you pursue? I would answer that you must reduce the dose gradually. As large doses of chloral are only given exceptionally, there will be less difficulty on this score than with opium; but as you reduce it I would strongly advise you to give strychnia or nux vomica, for its effects on the nervous system; it antagonizes the effects of the chloral and acts as a tonic at the same time. Those nervous centres which are reduced in their activity by the paralyzing effects of the chloral are stimulated by strychnia. If you use strychnia you may stop the chloral almost at once, without any bad effects being observed. I had a case in point last summer. A gentleman who had been taking chloral for some time found himself very weak, his will-power impaired, and he felt miserable. He determined to stop off entirely. He went to Atlantic City, without a single grain of chloral. He took constant out-door exercise. He was sleepless for a time, but he was able to overcome his evil habit, and, although he had been using chloral regularly for eighteen months, he recovered entirely. It should be stated, however, that while giving up the chloral habit he took from time to time strychnia or nux vomica.

ORIGINAL COMMUNICATIONS.

ANIMAL VACCINE VIRUS COMPARED WITH HUMANIZED LYMPH.

BY HUGO ENGEL, M.D.,
Philadelphia.

OF late a number of vaccine farms have been established all over our country, which proves that there is an increasing demand for animal vaccine lymph. It is therefore important to know more about the manner in which this lymph is collected, the different procedures employed, and the relative value of the two varieties of lymph now mainly used in vaccination. Dr. L. Lemmer, of Alford, has published "a critical study" of this subject:* as it contains a great deal of interesting information concerning animal and humanized lymph, I have made the following abstract of his article.

The results so far gained with animal vaccination are decidedly varying, according to the method of its employment: none, thus far, has answered all demands, and this may be one of the reasons why so many different processes are used. Not only the lymph, which oozes out by itself, but the whole substance of the pustule, even the latter together with its base, have been taken from the animal for the purpose of gaining the lymph. And here it answers the same purpose, as regards success and possible value, if the pustule is taken hold of with the forceps and then the pure lymph or the pustular mass is used for vaccination (Dutch method), or if the pustule is cut off with its base and either turned over the finger or nailed on to a board (Neapolitan method of Negri).

The success is almost a perfect one. In Rotterdam (Dutch or Holland method), for instance, for the year 1876, 99.3 per cent. success of vaccination; 1877, 99.8 per cent., and each time in average 8½ pustules from 10 cuts; in Amsterdam, for the year 1878, 100 per cent. success are reported, and $8^{1}/_{5}$ pustules in average from 10 cuts; in 1877, only 7⅗. Frequently, however, these figures indicate only the final results after repeated vaccination. Voigt, in Hamburg, for instance, had in primary vaccination 94.1 per cent., in revaccination 75.2 per cent.; but by one to three revaccinations he increased the latter percentage to 98.8 per cent. and 84.3 per cent. respectively. One heifer is good for one hundred to one hundred and twenty vaccinations,—according to Voigt only for about seventy; a cow, according to Pfeiffer, only for sixty-three. It may be mentioned that rarely or never is such an animal exhausted perfectly (regarding the amount of lymph gained from it) for direct vaccination; most of the lymph is usually employed for the purpose of being sent away to

* Vierteljahrsschr. f. gerichtl. Med., Bd. xxxvi. H. 2, 1882.

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persons living at a distance, so that really direct vaccination happens rarely.

For the conservation of animal lymph the process of thoroughly drying the same has always been the main object. The pure lymph, which sticks to the lancets, etc., used in vaccinating the animals, and then dries, can always be employed for revaccination; and the same may be done with a lancet with which a human being has been vaccinated. If allowed to dry without being cleansed, the lymph on it will suffice for vaccinating a cow.

The drying of the pustular substance after having been scraped off the animal is especially practised by Reissner in Darmstadt, who has many imitators in this country: he rubs to powder-form the pustules of one or more heifers, and to diminish the too intensive action of such pustules he adds older and recently-dried pustular mass together. This loses within the first eighteen days but very little of its effect. With this powder are given small flat pieces of ivory, in which are cut three or four fine slits. When vaccination is to be practised, the necessary quantity of the powder is moistened with a little glycerin and water and pushed into the slits; or—the more usual manner—several fine cuts are made into the skin just below the insertion of the deltoid of the person to be vaccinated, and the moistened powder is worked into the cuts with the flat side of the lancet, or with an ivory rod. Reissner had during 1882 98.9 per cent. personal success in vaccinations, and 92.6 per cent. in revaccinations. From two to three vaccinations may be made from one pustule; but Reissner intends to institute a series of experiments by which, through the addition of some indifferent vegetable or mineral powder to the vaccine powder, the latter may be increased in quantity capable of serving for more than three vaccinations without losing in effect.

Several years ago Dr. Frappoli dried the pustule, which was cut out with its base, by the aid of the pneumatic machine: vaccine lymph so treated, and preserved for a period of four years, was employed by him and others with perfect success in vaccination. Dr. Margotta, in Naples, reduced the dried pustule to powder, and found that the effect of the latter was preserved several months later.

The conservation and mailing of the pure lymph in fluid form in homœopathic glasses, in small reaction-tubes, in quills, between two pieces of glass, and in capillary vessels, has been frequently practised. The results, however, have nowhere been satisfactory: the general complaint has been that the fluid lymph loses its effect too rapidly. The writer of this had occasion to convince himself of the truth of this assertion.

The conservation of the whole pustular mass in the same condition as it is taken from the heifer has been attempted in Italy, Belgium, Holland, Germany, and in our country,—especially, however, in Hamburg, where it is spread upon glass, a second piece of glass is laid over it, and the edges are hermetically closed with paraffin lac or plaster of Paris. Belluzi, of Bologna, adds to every pustule one drop of glycerin, and of his two pieces of glass one is excavated. His mass is said to be effective for three or four weeks; in Hamburg it lost the effect often after one week, though it answered for three to five months longer for the vaccination of heifers.

The latest method, however, is the one recently published by Pissin, of Berlin. He scrapes the pustular mass off its base, and puts it in a watch-glass which for eight to ten pustules contains six drops of glycerin and six drops of a one-half-per-cent. salicyl-water; then he mixes the whole thoroughly, permits it to stand for several hours, and pours afterwards the clear glycerin solution into several large capillary glasses. From the last heifer, which had been vaccinated in December, four hundred and seventy small capillary tubes full of this lymph were obtained; from the one before the last, three hundred and fifty; they average three hundred, and each tube suffices for one to two vaccinations. So far it has been proved that this lymph retains its full effect for longer than three weeks. Pissin intends to make further experiments, adding a larger percentage of different disinfectants, to determine to what point of dilution he might go without detrimental influence on the effect of the lymph, and how far he may proceed with the addition of disinfectants to preserve the effect of the lymph as long as possible without weakening the same.

Pissin gained in vaccinations performed either by himself or under his direction very good results,—viz., 98 per cent. in

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primary cases, and 97.3 per cent. in re-vaccinations; while the results achieved with lymph which by him was mailed to distant places showed 86.8 per cent. in primary cases and 59.3 per cent. in re-vaccinations. Pissin himself explains this discrepancy by supposing that some physicians either did not pay strict enough attention to the technique of the operation or used lymph rather old.

To judge from the results gained with this new method, Lemmer recommends to disregard direct vaccination from the heifer. In reality, animal lymph should not be used till the slaughtering of the animal has given proof that the latter was perfectly healthy, to meet the objection that possibly also by animal lymph diseases, as tubercles, etc., may be transferred to the vaccinated human being.*

Those methods are less valuable by which the fluid vaccine lymph alone is taken from the animal, as this is neither so effective nor can it be kept for so long a time as the whole pustular mass, and the latter can be more thoroughly exhausted. Totally to be discarded are all methods by which the pustule is taken from the animal together with its base, as by such a procedure the animals unnecessarily suffer a lesion, pieces of the cutis being in reality cut away, which are of no effect whatever in vaccination, but may be under circumstances dangerous even. The pustular mass scraped off must in its natural state also be considered as not suitable, since it is impossible to keep it for any length of time without its losing all effect.

Useful methods are, according to Lemmer, the following only: the vaccine powder prepared after Reissner, the Mailand paste, and the glycerin solution after Pissin. These three, however, do not possess equal value. Reissner's powder is connected with too much trouble and difficulty in vaccinating with the same, and, on account of the minute size of a dose, is not adapted for retail trade. It has also not been proved as yet that it will keep a sufficient length of time; and, lastly, the whole material is not so perfectly exhausted as is the case with Pissin's glycerin solution, where there is no waste. The Italian method, known by the name of Mailand paste, is said to be very effective and to keep a long time, can easily be employed and the material totally exhausted; but, except in Italy, where now for some years past the reports regarding it coming from many different sources have been exceedingly favorable, this same good result with the same vaccine matter has not been met with in any other country, which at least seems to show that the Mailand paste is not adapted for export.

In order that lymph shall answer its purpose in every way, it must fulfil the following conditions: (*a*) it should at any time be obtainable in sufficient quantities; (*b*) it should be reliable in its action, and retain this effect until totally used up, and be adapted for export or for sending to distant localities; (*c*) easily to be applied, and perfectly exhaustible without waste; (*d*) free of danger and innocuous regarding its application and effect; (*e*) possess a protective power against variola for as long a period as possible; (*f*) permit its being collected in an easy manner, and to serve as an article of trade, like other drugs; and (*g*) it should be as cheap as possible.

Animal lymph is the only one which, if prepared and collected, preserved and applied, *lege artis*, will fulfil all these expectations.

Humanized lymph is superior in one respect only to animal lymph; it retains its full effect for a longer time than the latter; but the animal virus, especially the glycerin solution of Pissin, accomplishes to-day also in this direction everything which we practically can demand from it. In every other respect, animal lymph is either of equal value or superior to humanized virus; the former alone is adapted for a trade in vaccine matter, as in it alone we can receive a full guarantee against any detrimental and injurious effect of the virus itself. The fact that humanized lymph could always be procured cheaper is no obstacle to the employment of the animal lymph, if we consider the guarantee mentioned; and, besides, animal virus may now be sold

* It is well known that vaccinating a heifer with human smallpox lymph, while causing the pustular eruption, has no influence whatever on the general health of the heifer, and after the pustules have fallen off and the skin has reassumed its normal appearance, the flesh of such animal after the latter has been slaughtered is in as good a condition as it was before the vaccination. This is such a well-established fact that in Prussia there is no law forbidding the sale of such meat. For pecuniary reasons, healthy heifers destined to be slaughtered should be selected for this vaccination, and, as this procedure is equivalent to an income of about seventy dollars (three hundred capillary tubes at twenty-five cents), such an enterprise should be a paying one.

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even cheaper than the former. The protective power of vaccination against variola as regards length of time and degree, as well as its dependence upon the kind of lymph employed, is a problem not as yet solved: to decide this question, a thorough reform of statistics in conjunction with the medical profession and public sanitary boards, and of experiments, would first be necessary.

It is the duty of the government to see that preventive measures are taken against epidemic and contagious diseases, that compulsory vaccination is correctly performed, and that the best virus is obtained and placed for such purposes at the disposal of the medical profession.

507 FRANKLIN STREET.

A CASE OF PYÆMIA EXTENDING OVER A PERIOD OF SIX MONTHS, WITH RECOVERY.

BY ROBERT KILDUFFE, M.D.

Presented by Dr. O'Hara at the Clinical Meeting of the Philadelphia County Medical Society, February 21, 1883.

J. B. M., aged 17, occupation clerk, on July 25, 1881, bruised the index finger of his right hand in handling a case of goods weighing eighty pounds.

He continued at work for two days, although suffering great pain, the finger being red and swollen. On the 27th of July it was punctured by his employer with his penknife, the blade of which had been in ordinary use: only a few drops of blood were lost, and this afforded him but little relief.

On July 28, he consulted Dr. Kilduffe. The finger was found to be very much swollen, and tender; but slight discoloration, and no sign of suppuration. His general condition was good.

Iodine was used locally, a splint applied, and a purge given. He returned to work on the 29th, against the doctor's advice, but was compelled to go to bed on the 30th.

On the 31st he came to the doctor's office, complaining of headache and intense pain in finger; tongue heavily coated; high pulse; temperature, 100°. He was ordered to bed, and finger poulticed. These orders were not thoroughly carried out, the patient insisting on returning to work, and upon being summoned, two days later, the doctor found a violent cellulitis extending from the index and second finger up the wrist and arm, with great tension and pain. Temperature, 101°; pulse, 140.

On August 3, Dr. M. O'Hara was called in consultation, and continued thereafter throughout the case. A free incision was made in the finger, followed by no discharge of pus, and affording but little relief.

The second phalangeal joint of the second finger was much swollen, and suggested the possibility of pyæmic arthritis at its metacarpal extremity. Two days after, owing to the critical condition of the patient, Dr. Willard was called in consultation. A crucial incision was made in the palm of the hand, and the second finger was laid open to the bone.

During the following two weeks, six abscesses formed and were evacuated on the anterior and posterior surface of the arm and about the joint, but not involving it, although the joint itself was inflamed.

The whole hand at this time seemed to be dead, and no amount of poulticing or stimulating injections could induce the tissues to take on a healthy action. Amputation was dreaded, or at best a stiff hand with contracted fingers.

Orchitis on both sides now supervened, which yielded to appropriate treatment, to be followed by a low grade of pneumonia of the left lung. There were no certain manifestations of pyæmic deposit, though minute foci of pus were suspected.

Enlargement of the liver, with free jaundice, occurred next, which disappeared in about ten days. Then dysentery set in, accompanied by bloody and purulent stools.

All this time new abscesses were forming and reforming in the arm, as fast as opened, the pus burrowing in the intermuscular septa between the superficial layer of muscles.

The kidneys were next attacked; nephritis set in, and blood and pus appeared freely in the urine.

Dr. Garretson was now called in consultation. Within the next three weeks an abscess formed in the neighborhood of the left elbow-joint, and was opened.

Then there was retention of urine; a catheter was passed once, but the patient, worn out with pain and agony, refused to again allow its use.

Incontinence followed this retention. The assigned cause for this was a probable formation of pus around the neck of the bladder or the prostate gland.

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An abscess now pointing in the perineum, it was opened a little to the left of the raphé between the crura, the knife being directed after the manner of the operation for median lithotomy, and pus and urine discharged freely. The urinary fistula remained open, and a flexible catheter was retained for about six weeks, at the end of which time the urine passed by the urethra.

The second phalangeal joint of the second finger being totally disorganized, amputation was performed. Four months' fighting of the constitution with pyæmia had reduced the patient to an almost hopeless state. During the last month he rallied several times from an apparently dying condition.

Opium, quinia, sulphide of calcium, eucalyptol, salicylic and carbolic acids, iron, milk, beef-tea, etc., and four ounces of alcohol diluted, were given daily for weeks together. The temperature throughout was irregular, varying from 100° to 101° during most of the time; formation of pus was heralded by a temperature of about 103°, but he never had at any time either rigors or sweats, which so commonly attend pyæmic manifestations.

Notwithstanding the stimulating treatment, his exhaustion was progressive, and for some weeks he remained in a moribund condition.

It was thought that he could not survive any further evolution of the poison in his blood. He rallied very slightly, and about the end of November a new abscess formed under the spine of the right scapula, being preceded by wandering myalgia on the right side of the chest. It was opened, and in a couple of days another one formed, a little below the first and communicating with the axilla. The upper one was healing, when suddenly blood was found oozing from it, and there was apparent communication with the lower cavity, as shown by its rapid distention in a few hours, and still further by the new symptoms of the patient, which were those of loss of blood.

Death was imminent, and in consultation with Drs. O'Hara and Garretson it was deemed imprudent to give him ether, so low was his condition. The two cavities were laid in one by an incision three inches long, and over a pint of clotted blood turned out.

Failing to arrest the hemorrhage by syringing the cavity with hot water, it was packed with strips of muslin, two inches wide and seven yards long, soaked in phénol sodique, a graduated compress applied, and the chest tightly bandaged.

The packing was removed on the third day, and the cavity washed out with eucalyptol. It healed very slowly, continuing to discharge pus for about three weeks, and, from its size and depth, a series of graduated compresses were required to prevent its accumulation.

This cavity seemed to be a sloughing of all the connective tissue from the axilla to the sternum, and between the trapezius and latissimus dorsi, on the back, and the pectoralis major and minor and serratus magnus muscles in front.

This was the last attack. The patient very gradually regained his strength, and at the end of a six months' fight appeared to be reconstructed as to the condition of his blood.

We present him to you this evening as a sound, healthy young man, although he bears on his person twenty-three scars of the surgeon's knife.

725 South Ninth Street, Philadelphia.

CASES ILLUSTRATING SOME FORMS OF INJURIES TO THE ARM RESULTING FROM MUSCULAR VIOLENCE.

BY WILLIAM BARTON HOPKINS, M.D.,

Surgeon to the Out-Departments of Pennsylvania Hospital, Episcopal Hospital, and Hospital of the University of Pennsylvania.

RUPTURE OF THE TENDON OF THE LONG HEAD OF THE BICEPS.

A. F., æt. 55, a muscular man, applied to the Episcopal Hospital, January 9, 1883, for the relief of rheumatic pain in the right shoulder-joint, which had given him occasional annoyance for several months. While an examination of the shoulder was being made, a curious deformity of the arm was observed, which, on being questioned, he gave the following account of. Five weeks before his appearance at the hospital, while rolling a barrel of paint upon the scales, he lost control of it for a moment. He was caught, hand and elbow, between the barrel and the wall. To extricate himself, he made a violent effort to resist the movement of the falling barrel by bending his elbow, when he felt something suddenly snap in his arm. Although at first he experienced some pain and partial loss of power in the arm, he was disabled for a very short time only, and paid but little attention to the accident.

The deformity consisted in an altered shape and position and apparent increase in size of

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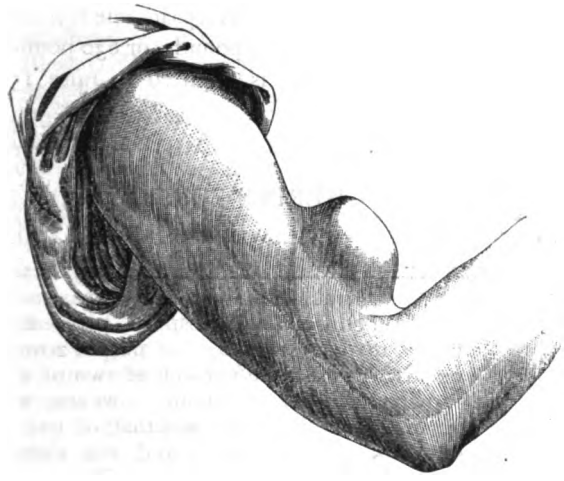
the biceps muscle. All these conditions became exaggerated when the muscle was contracted and the forearm flexed at a right angle with the arm. The description of the deformity (which is well shown in the accompanying illustration) will therefore be made of the limb in this posture.

The mass of muscle stood out prominently. Its upper border, irregular in outline and



somewhat nodular, terminated abruptly in the depression which exists just below the inferior margin of the deltoid. The hard, nodulated condition at this point was evidently caused by the contraction of unresisted muscular fibres upon themselves and on their tendinous coverings. The position of the muscle was changed, being below the middle of the arm rather than slightly above, as in health. The tendon of the short head could be clearly traced almost up to its origin at the coracoid process of the scapula, while that of the long head could not be felt to react at all beneath the fingers during forcible flexion and extension of the forearm, as it ordinarily can be. To the integrity of the short head is to be attributed the usefulness of the limb. The pain complained of in the shoulder seemed to have no connection with the injury, as it was no worse after than before the accident, and as other joints had been similarly affected.

No treatment was employed for the ruptured tendon.

THREE CASES OF FRACTURE OF THE HUMERUS FROM MUSCULAR ACTION.

Case I.—A. B., æt. 30, policeman, a large, powerful man, in perfect general health, applied to Pennsylvania Hospital, July 27, 1882, having sustained a fracture of the right humerus at its middle third from throwing a base-ball *overhand*, not as in a case recently reported by Dr. James Collins, where fracture of the humerus was caused by *underhand throwing*, or "pitching." The arm was placed upon an internal rectangular splint, a cardboard cap extending from the shoulder to the elbow was applied, and the arm retained to the side of the body by spiral turns of a bandage. Early in the second week, the dressing having been reapplied probably three times, the patient remained away from the hospital for nearly three weeks. When he returned he explained his absence by saying that he did not think it necessary to come back until the bandages became disarranged. Firm union had, however, taken place, and there was practically no deformity. Good motion existed in the adjacent joints, and he was very soon discharged cured.

Case II.—O. K., æt. 35, a very powerful colored man, applied to Pennsylvania Hospital, August 28, 1882, with a fracture of the humerus at the middle third, induced by muscular violence. During an altercation he directed a hard blow with his fist at another man. He missed his mark, and the arm fell powerless at his side. The broken fragments of the bone were brought readily into proper position, and the case was treated in a similar manner to the one just described. He also made a good recovery.

Case III.—R. E., æt. 55, a stout woman, in moderate health, applied to Pennsylvania Hospital, November 27, 1882, suffering from an injury about the right shoulder of seven weeks' standing. While in the act of carrying, with the assistance of another person, a large wash-tub full of clothes and water from the kitchen to the yard, she gave her arm a wrench in descending the step. A violent crack was felt and heard, accompanied by severe pain in the shoulder and complete loss of power in the arm. She called no one to attend her, and remained helpless for some time. Finally, however, she began to use the forearm and hand a little, but, as the arm remained useless and gave her a good deal of pain, she, at the end of seven weeks, applied to the hospital for relief.

The symptoms pointed to fracture of the humerus, probably through the anatomical neck, and possibly within the limits of the capsular ligament. Crepitus could be felt high up over the head of the bone,—crepitus which was sharp in character, little modified by absorption or deposition of callus, and only occasionally to be elicited. No repair had taken place, therefore, and, as the patient had noticed the crepitation herself ever since the occurrence of the injury, it could not have depended upon either a bursitis or an arthritis of the shoulder. An accurate diagnosis, however, was impracticable, both on account of the age of the injury and the quantity of fat which covered the shoulder.

The treatment consisted in the application

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of a cardboard shoulder-cap and the retention of the arm to the side of the body. Improvement in this case, as would be expected, was very slow.

In recording the foregoing cases, a few remarks based upon an analysis of the laws of mechanics governing the action of levers in their relation to muscular strain may not be out of place. For, although these laws and their application to the power of muscles and movement of bones are facts familiarly known to every one, their special significance to the subject under consideration may have escaped the attention of some.

When the forearm is flexed at the elbow-joint by the contraction of the muscles of the arm, the lower end of the humerus acts as the fulcrum, the biceps and brachial muscles the power, and the hand, with whatever it may grasp, the weight. The forearm is, in other words, a lever of the third kind. In such the power must always be greater than the weight, technically expressed by the phrase "mechanical disadvantage." The amount of mechanical disadvantage to which the muscles of the arm are put to raise a known weight placed in the hand is computed by multiplying the weight to be raised by its distance from the fulcrum and dividing the product by the distance of the power from the fulcrum.

The following measurements were taken from the bones of a well-developed male skeleton: from the bottom of the sigmoid cavities of the ulna to the metacarpo-phalangeal articulation of the middle finger, fourteen inches, and from the same point to the tuberosity of the radius, two inches. (For convenience in computation, the attachment of the biceps alone will be used, as it is the more important flexor muscle, and as it presents less mechanical disadvantage than the brachial.) The power, then, in this lever is to the weight as seven to one. If, therefore, a weight of one hundred and fifty pounds is raised in the hand by flexing the forearm, the power exerted by the muscles in executing this movement is represented thus: $\frac{14 \times 150}{2} = 1050$ pounds, —a force well calculated to part a tendon or break a bone.

The fact that the forearm cannot be extended with as much force as it can be flexed, though with greater velocity, of course depends upon the difference in distance between the power and the fulcrum in the two cases. For in the same specimen the distance from the point of insertion of the tendon of the triceps in the olecranon to a point opposite the bottom of the sigmoid cavities of the ulna was found to be only half an inch. The power, then, in this lever is to the weight as twenty-eight to one. Therefore, when a sixty-pound dumb-bell is put up from the shoulder, the force exerted by the triceps muscle is shown thus: $\frac{14 \times 60}{\frac{1}{4}} = 1680$ pounds, or 630 pounds more force than is required to raise 150 pounds by flexion.

HERPES ZOSTER.

BY HENRY M. WETHERILL, JR., M.D.

WITHIN the past six months of my residence in the Insane Department of the Pennsylvania Hospital, I have had under my care two cases of herpes zoster, occurring upon the persons of two of our inmates, neither of whom, however, was insane. The first case was that of one of our hospital attendants, and was caused probably by his taking cold. There was nothing remarkable in the situation of the disease in this instance; but the intensity of the local ulceration, and the gravity of the accompanying constitutional condition, render it worthy of notice. The patient, a stout, hearty man, aged 46 years, was of a very nervous temperament. Forty-eight hours preceding the first appearance of vesicles, he complained of pain and a feeling of stiffness in his right side, which was much increased upon his taking a deep inspiration. Pleurisy was suspected, but its absence was ascertained by physical exploration. When the vesicles appeared, they occupied the tracts of the intercostal nerves, showing all their ramifications and twigs from the fourth to the tenth rib, thus making a patch involved in the disease about eight inches in width, and extending from the spine behind to the median line in front. After the second day of the eruption, large bullæ formed, some of which were filled with pus; there were also a few true pustules. By the sixth day the vesicles and bullæ had collapsed; but now the temperature of the patient rose to 103° F., and extensive sloughing of all of the invaded skin followed, until the side presented the appearance of a deep burn. The pain was intense, and the patient obtained

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scarcely any sleep for several days and nights, although morphia was exhibited freely. High temperature, with exhaustion from pain, brought on slight muttering delirium at night. This condition lasted for five days; but the healing of this immense denuded surface progressed very slowly. He was in bed about twelve days, and confined to his room as many more. Deep and probably permanent cicatrices, with reddish-brown pigmentation of the skin, followed. There was a feeling of stiffness, with occasional twinges of neuralgic pain, felt for several weeks after convalescence. Upon examining the urine, it was found to be alkaline and to contain triple phosphate in excess; but after febrile action became excessive the urine became scanty, acid, and contained oxalates in excess, while the triple phosphate diminished in amount. The patient passed large quantities of pale, alkaline urine daily for two weeks after the temperature became normal. No albumen was found at any time. In the *Journal of Cutaneous Medicine*, vol. iv. p. 158, Erasmus Wilson cites a case in which this disease appeared in five distinct, separate tracks around the hemicycle of the trunk between the clavicle and the groin, occurring in the person of a gentleman who had been the subject of eczema for twenty years. This case might be called discrete, in contradistinction to my case, which was confluent, flaying a large section of skin from the patient and putting his very existence in jeopardy. Hebra states that severe ulceration followed by cicatrization is quite rare; that it is also rare for much neuralgic pain to precede, accompany, or follow an attack; and Rayer states that extensive sloughing of integument with grave constitutional symptoms is unusual except when the disease attacks the aged or infirm. It is always spoken of as an acute affection, and some author makes the remark that one has it only once in a lifetime. Lorry and Alibert admit the existence of a chronic form, and Buserius quotes a case. Rayer, Willan, Anderson, Fox, Hebra, and many more authorities have not encountered the disease in this form. The result of much research shows that one side of the body is about as often invaded as the other. Erasmus Wilson says that both sides of the trunk have been affected at the same time, but not at opposite points, so as to form a zona. This condition is extremely rare.

The other case referred to as having come under my observation lately was that of a gentleman of middle age, one of our voluntary inmates, of rather nervous organization, who has been and now is subject to severe attacks of neuralgia of the fifth pair. His attack was curious on account of the locality invaded and of the uncertainty of its causation. The groups of vesicles appeared over and mapped out the distribution of the lumbar plexus of nerves of the right side as follows: starting over the spine in the lumbar region, a line of patches of vesicles upon a dark-red ground followed the crest of the ilium and downward into the groin to the right side of the scrotum; another line ran down the right gluteal region; while between these two another line passed around the hip to the outer side of the thigh, branching about four inches above the knee, one branch running to the outer, the other to the inner side of the joint. The disease did not extend below the knee. The line of vesicles upon the thigh, assuming an almost perpendicular direction, should be classed under that subdivision of herpes zoster named by Bateman herpes proserpens,—*i.e.*, "creeping along." The penis was not involved. The distribution of the anterior crural nerve upon the front of the thigh was not invaded. The disease on all the surface indicated was very well marked, although the attack was not very severe, nor was it preceded, accompanied, or followed by neuralgic pains. The condition of the patient demanded no active treatment. I am rather uncertain as to what could have caused this attack, as all of the ordinary causes mentioned by the authorities had to be ruled out on account of the general health of the patient at the time, and of the good hygienic condition of the house. The patient has always been very susceptible to the emanations of drying paint, and was once made quite ill from continuing his business in an office which was being re-painted. About a week prior to the commencement of the attack of herpes, a large room in the same ward had been consigned to the painters, and he is sure that the attack was caused by his breathing an atmosphere tainted by the smell of paint. This will have to stand as a reason in default of a better one. Anderson Fox cites a case in which herpes zoster occurred as a complication of acute gastric catarrh; and Z. facialis has accompanied intermit-

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tent fever and pneumonia. The usual remedies are well known. It is well to avoid all greasy applications, as they seem to increase the patient's discomfort without modifying the disease. I have seen eight cases of herpes zoster, five of which were the ordinary Z. pectoralis, one was a case of Z. pectoralis in which the intercosto-humeral nerve was affected, causing the vesicles to appear upon the inner aspect of the arm, one of Z. occipito-collaris following the distribution of the cervical nerves, and one involving the lumbar nerves.

A SEBACEOUS CYST CONTAINING A COIL OF HAIR CONSISTING OF TWO HAIRS, EACH SEVERAL INCHES IN LENGTH.

BY H. W. STELWAGON, M.D.,

Physician-in-Charge at the Philadelphia Dispensary for Skin Diseases; Physician-in-Charge of Service for Diseases of the Skin, Northern Dispensary; one of the Attending Physicians to the Department for Diseases of the Skin, Howard Hospital.

SEBACEOUS cysts containing fragments of hair are, it is true, not uncommon. Such cases have from time to time received passing notice from different observers, and are also incidentally mentioned in almost every text-book which treats of these tumors. Examples of this kind have come under my personal observation in the past few years. The hairs in these instances are usually found to be small and atrophied. The case under immediate notice was in this particular, however, decidedly curious, if not extraordinary. The cyst occurred in a medical gentleman, and the history of the case may be briefly sketched as follows:

About two years ago, in casually scratching the face, he noticed a small nodule at the point where the facial artery crosses the jaw. It appeared simply as a small indurated acne papule. As the parts were covered with a beard, and as the nodule consequently could not be seen, the attention given it was merely accidental. After a few months it grew somewhat larger and became slightly inflamed. On squeezing it, a cheesy substance was discharged. It then returned to its former condition, except that it was a trifle larger. It continued in a quiescent state for a few months, and then went through the same phases as before, becoming inflamed, enlarged, and on pressure discharging sebaceous matter. Thus it continued, at longer or shorter intervals, for a period of eighteen months, giving but little trouble, except when inflamed, and even then the annoyance was trifling. At the end of this period the tumor was about as large as a medium-sized pea, and very little above the level of the skin. About this time the gentleman shaved off his beard. The cyst immediately began to grow rapidly larger, and could be seen as an elevation with a small central depressed aperture, discharging at frequent intervals. The gentleman introduced a pointed stick of nitrate of silver into the opening, and endeavored to cauterize it. Considerable inflammation ensued, and from a fourth to a half ounce of pus was discharged daily. The tumor was now about the size of a small marble, with considerable surrounding inflammation. After the inflammation had subsided somewhat, and about six months after the shaving off of the beard, the cyst was excised by Dr. Ashhurst, of the University. The sac was bound down to the parts, so that in removal it was necessary to take away some of the surrounding tissues. The cyst was subsequently opened, and, in addition to small quantities of sebum and pus, was found to contain a coil of hair, apparently made up of one hair, eleven or twelve inches in length. On lengthening it out for the purpose of obtaining measurement, the coil was found to consist of two hairs, one six inches in length and the other four inches and a half. The hairs were unattached.

The history of the case from the beginning is that of a simple discharging sebaceous tumor, becoming at times inflamed by the accumulated sebum. The interest, of course, centres in the coil of hair and the solution of its presence there. The coil into which these hairs were wound was of the diameter of a little less than a quarter of an inch, and appeared as if it had been made with the greatest care. As stated above, there was no attachment found, although the force necessary to enucleate would doubtless have severed any connection had such existed. It is rational to suppose that the hairs began to grow in the sac and coil themselves just after the shaving off of the beard. That such could not have taken place before this is shown by the small size of the cyst up to that time. After the shaving it is probable that the cyst, growing rapidly in size by extending at its circumference, carried in its under wall the hair-follicles with their enclosed bulbs. The hairs growing struck against the upper wall, and, being unable to penetrate, were reflected, and in that manner gradually wound themselves into the coil that was found enclosed. The hairs were good and strong and in no way

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atrophied, and appeared as if broken off near the roots. It is, moreover, probable that they were attached and growing up to the time of enucleation. This is rendered more likely by the fact that the hairs were of considerable length, and must necessarily have been growing several months,—fully as long as the time that elapsed between the shaving off of the beard and the excision of the tumor.

A SLOUGHING ULCER PERFORMING A VICARIOUS FUNCTION.

BY P. HOOPER, A.M., M.D.

E. C. (colored), with a sloughing ulcer on her right leg. Eight and a half years had passed from the time the ulcer first made its appearance after a bruise, to the time I saw the patient. From the time of its appearance, the ulcer was constantly growing worse. Three years after her injury the ulcer began to bleed. The hemorrhage was a vicarious one, taking the place of her periodical sickness. One month she menstruated, the ulcer also performing a part of the menstrual office. The following month the ulcer entirely replaced the uterine discharge, bleeding very copiously. Occasionally the ulcer would replace the uterine discharge for two and sometimes for three successive months. So free was the hemorrhage from the ulcer that, in the words of the patient, her "stocking was soaked, and her foot slopped in the blood." She thought that when she missed her periods the ulcer menstruated more than a quart of blood. These excessive hemorrhages had weakened her very much, and the days upon which she was able to work were becoming less and less.

When I examined the patient, I observed the following symptoms. Pain of an intense nature radiated from the tibia where the ulcer was situated, and was most severe on the side where it originated; it was also more excessive at night, and became almost unbearable when the patient was warm in bed. The hands and soles of the feet were very hot and dry, and the surface of the entire body was parched and feverish. The patient was suffering from severe chronic constipation. The ulcer presented all the appearances of the sloughing ulcer in its worst stages. The surrounding parts were very painful, and the bone was bared and very sensitive. The ulcer nearly encircled the leg, and the discharge from it was extremely offensive. The patient evidently was suffering from periostitis, which had extended to the compact tissue of the bone. The fibrous lymph and leucocytes which had transuded during the inflammatory attacks had undergone ossification over portions of the tibia, enlarging and thickening the bone. The night-sweats and pain were due to specific rheumatism. The nature of the ulcer was syphilitic. On December 26, 1882, the patient was directed to go to bed and keep the leg in an elevated position and perfectly quiet. For the first week the local treatment was flaxseed-meal poultices changed several times daily. Neutral mixture and Hunyádi Janos water were given, also iodide of potash in ten to fifteen grain doses *ter die*.

The neutral mixture and morphia were discontinued after the first week; dilute Labarraque solution was used locally, and afterwards a twenty-grain nitrate-of-silver solution. After the second week adhesive strips were applied daily to the ulcer, and an elastic bandage used. After my patient had been taking the potassium salt for a time, severe ulcerative stomatitis and salivation resulted. The patient had undoubtedly taken large quantities of mercury, which had been stored up in an insoluble condition in the various tissues of the body. The iodide of potash after its absorption had formed a double soluble salt with the mercury, and, as the mercury was rapidly liberated, the ptyalism that resulted was very severe. The tongue was ulcerated and enormously swollen, and a large alveolar abscess formed on the lower jaw. After the first month I still continued to change the adhesive straps, used the tepid water as a wash, and, in addition, applied an ointment of iodoform, benzoated oxide of zinc, and morphia. When the time came for her periodical sickness, the ulcer, which had granulated under the above treatment with great rapidity, put on an angry look; the granulations looked red and inflamed, and considerable blood-stained serum exuded. The foot became enormously swollen, and so hot and painful that the patient had to remove the bandage during my absence. When I came, I renewed the strips, putting them on tightly, and reapplied the roller smoothly and firmly. At the second menstrual period the swelling and the transudation of serum were scarcely noticeable. The ulcer has entirely skinned

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over, and the patient is now out of bed and able to be about.

This vicarious function of menstruation from an ulcer has been very rarely met with. Blundell instances the case of a girl in St. Thomas's Hospital, who had a discharge from an ulcer on the hand which replaced a uterine discharge for three successive periods. Ashwell mentions a case in Guy's Hospital; also Dewees, Whitehead, Mason, Boring, and Wiseman, chirurgeon to Charles II., each mention one case. In Boring's case amputation was necessary, the ulcer becoming so large; after amputation, blood-sacs appeared at menstrual periods on the stump.*

3509 North Seventeenth Street.

A CASE OF TRIPLETS.

BY JAMES HENDRIE LLOYD, M.D.

On Tuesday evening, February 27, I was called to see a woman, the history of whose case has some special interest. The city newspapers printed accounts of it, more or less exact, but I have thought that a more detailed and technical report in a medical journal was due to a case which is something of a rarity, even in the history of multiple pregnancy:

Mrs. Kate W., æt. 34, white, multipara, a native of Ireland, called to make a social visit at the house of a friend. She was probably in the eighth month of pregnancy at the time, but had no suspicion whatever that she was carrying more than one child: upon this point the woman's statement is very positive. Late in the afternoon she complained of not being well, but neither she nor her friends appear to have suspected the onset of labor. She was asked to stay all night, which she consented to do. About two o'clock in the morning she went into active labor, and was delivered rapidly of three children, with no physician or skilled nurse to assist her, but with the help of a venerable Irishwoman, who had certainly never seen the like before. From this ancient female and from the patient herself I gathered the following facts. She first expelled a very large clot, so large and firm that she thought it was the child presenting. After labor had lasted about one hour, the first child, a boy, was born living; in fifteen minutes a second living boy came. The old nurse, naturally thinking that these were all, detached the children, and then, grasping the two cords, awaited events. I have no doubt she pulled violently upon the cords. Be that as it may, in another half-hour a still-born girl was expelled, with all the placentæ. Upon this last point—the expulsion of the secundines—very particular questions were asked, to which the nurse answered that she knew the after-births had all come away, because "the three were joined together at their edges, and each had its own navel-string running to it." They had been thrown down a cesspool before I reached the house, some hours after labor. The woman had a good lying-in, and her two babies, although weak and puny, were at last accounts thriving. To avoid medico-legal trouble, the coroner was notified, who removed the dead child, so that I had but little chance to examine it. I could learn nothing reliable about the presentations.

The points of special interest in the case are the ease and rapidity of labor, and the death *in utero* of the third child, in reference to which the query may arise, Could it have been caused by the too early detachment of its placenta, as indicated by the large clot which was first expelled, or by bleeding from the free ends of the two cut cords, supposing an anastomosis of the placentæ? It was also noticeable in this case that the woman had not lived with her husband for two years.

Triple pregnancies are rare. Dr. Dewees,† in a practice of nine thousand cases, did not meet with an instance. Churchill's statistics‡ give the proportion as 1 to 5831 cases of labor,—a rate which is possibly too high. A general summary for the city of Philadelphia§ for fourteen years, from 1861 to 1874, inclusive, gives a total of 240,688 births, with 30 sets of triplets, or 1 in 8023. As showing how valueless statistics are as a basis to foretell results, I may refer to the years 1863, '68, '69, and '73, in which no triplets were reported in this city, and yet in the one month of February last four cases are reported to have occurred. Quadruple and quintuple cases are, of course, still more rare; but authentic cases are recorded. Thus, the museum of the London College of Surgeons contains five fœtuses of which a woman aborted at the fifth month. Ambrose Paré relates circumstantially that a lady of his time gave birth in one labor to *six* children, one of whom survived and was a French nobleman; but Ramsbotham, who relates the tale,‖ says that Paré was a

* Agnew's Surgery, vol. I. pp. 120, 121.

† Comp. Syst. of Midwifery. Philadelphia, 1828.
‡ Quoted by Cazeau, Treatise on Midwifery.
§ Board of Health Reports, 1874.
‖ Principles and Practice of Obstetrics, etc.

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"good surgeon," but a "credulous philosopher."

WALNUT AND FORTIETH STREETS.

EROSIONS OF CERVIX AND EXTERNAL OS.

BY FERDINAND LESSING, M.D.

IN the *New York Medical Record* of February 10, 1883, there is an admirable original communication on the "Etiology of Cervical Forms of Non-Puerperal Uterine Hemorrhage," by that eminent observer, Paul F. Mundé, M.D. Under the heading of non-puerperal erosion of the cervix, Dr. Mundé claims two causes of this lesion:—first, catarrhal discharge from the cavity of the cervix, and, second, friction of the cervix against the posterior vaginal wall. Last summer, while practising in Minnesota, I had a married lady under treatment with ovarian congestion and cervical ulceration. The ulceration was on the posterior lip, and, while attempting to bring it with the aid of the uterine sound well into view, I had the rare opportunity of seeing the behavior of the cervix and os during orgasm: firm contractions alternating with relaxations about six to seven times in quick succession completed this act. There seemed to be in this case a hypersensitiveness of the mucous membrane of the cervix, analogous to the same condition in the male ureter, so admirably described by the late Dr. Beard. From the above observation I came to the conclusion that this behavior of the cervix is an important factor in cervical erosions. The forcible contractions must necessarily in some cases cause sufficient friction to abrade the cervical epithelium and mucous membrane of the external os.

This also may account for some of the cervical erosions of the virgin, as, for instance, in the masturbating class, and those whose sexual organs become morbidly sensitive by the reading of exciting novels, thereby producing repeated capillary turgescence, followed by the catarrhal state. Again, these erosions may be due, in some of the otherwise strong and healthy married females, to the same cause by over-sexual indulgence, independent of the actual contact of the male organ with the cervix. Not having seen uterine orgasm mentioned in any of the works on gynæcology as a cause of erosions, I respectfully report this probable additional cause to the profession.

1113 WALLACE STREET, March 5, 1883.

NOTES OF HOSPITAL PRACTICE.

UNIVERSITY HOSPITAL.

CLINIC OF PROFESSOR WILLIAM GOODELL, HELD FEBRUARY 28, 1883.

ENUCLEATION OF A LARGE INTRAMURAL FIBROID TUMOR FROM THE POSTERIOR WALL OF THE UTERUS.

GENTLEMEN,—The operation which I purpose to perform this morning is a serious one, and it is one which I may not be able to complete within the hour: it is the removal by enucleation of a large intramural fibroid tumor from the womb. This will be the third case of enucleation that I have had lately in this amphitheatre. One I had before you last Wednesday, in which, as you will recollect, during the operation the thinned-out fundus of the womb was accidentally perforated by the uterine sound. With reference to this accident, the penetration of the peritoneal cavity by the sound, I told you that several cases had been reported, but that to the best of my knowledge no fatal result had as yet followed. I can make a similar report in this case: no bad symptoms whatever were produced, and she left the hospital yesterday, and went to her friends in New Jersey, a little sooner than we desired, but she was feeling so well that she took the risk and went out, although it was against our advice. So you see the accident did not do her any harm. The other case was one in which the growth was limited to the cervical zone, and requires no special comment; the former, as you saw, was developed in the fundus, and we were obliged to invert the uterus in order to peel it out of its nest. Both patients recovered.

The present case is a married woman, 38 years of age. Her last child was born five years ago. She has had five children in all. Some time after the birth of her last child, which was apparently a normal delivery, in the spring of 1880 she became subject to serious hemorrhages at her monthlies, which became worse and worse, greatly reducing her strength and rendering her very anæmic. I first saw her two years ago: she was then bleeding furiously. She was almost bloodless, and had a translucent, waxy look, like alabaster, so that one could almost see through her. Without dwelling upon the history, I will state briefly that by medicinal means nothing could be accomplished. Ergot and muriate of ammonia were used without benefit, and yet her life was threatened by this constant

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bleeding. I then took her into my private hospital and endeavored to remove the tumor through the vagina by enucleation. I took away a large portion of it which broke off in the efforts at removal. I then desisted for the time, and gave ergot in the hope that the remainder would be thrown off by uterine contraction. After waiting a couple of weeks, during which disinfectant washes were used, I again attacked it, and removed another large portion; and, if I remember rightly, I operated a third time before I succeeded in taking away the remainder of this large growth, which lay in the anterior wall of the womb. At my last examination I also found a small growth coming in the posterior wall of the womb, which I could not reach and had to leave for the time, while still keeping the case under observation. She recovered her health, and from that time her monthly flow was natural and she felt well until last March, nearly twelve months ago, when the hemorrhages reappeared, and have since then been frequent, profuse, and exhausting. As she is not yet 38 years of age, these hemorrhages will probably continue for a number of years before they could be checked by the occurrence of the menopause,—for twelve years or more, if her life be prolonged that far. In all probability, however, the bleedings will shorten her life materially, and may prevent her attaining the age when physiological changes will afford her the needed relief. But this, although a valid reason for performing an operation here, is not the main reason in this case. The woman lives in humble circumstances, her husband is poor, and her family needs her care, but she is so weak and prostrated as to be almost helpless. She has to be lifted from her bed to a chair or be carried up and down stairs, and is practically an invalid, bedridden most of her time. She is, therefore, especially anxious for relief from these hemorrhages, in order that she may again be able to perform her household duties.

The growth is an intramural fibroid of large size, and has been developed in the posterior wall of the womb. Now, my plan of operation is this. The woman, having been fully etherized before being brought into the room, is placed upon her back, with knees and thighs strongly flexed, and brought to the end of the table. I purpose to incise with a subcutaneous saw the bulging posterior lip of the cervix and pass in my finger in order to try to separate the tumor from the surrounding tissue of the womb,—peeling it out of its capsule like an orange turned out of its skin. I shall try to enucleate it, but may not succeed in removing it wholly at one sitting.

What are the principal dangers of this operation? They are two: (1) bleeding during the operation, (2) septicæmia after operation. The bleeding may be alarming, and in order to be prepared for it I have at hand some vinegar, and also Monsel's solution, to be used in case the other is unsuccessful. With regard to the occurrence of septicæmia, it must be confessed that there is a danger that she may die of blood-poisoning. It is to be remembered that the enucleation of a large growth leaves a decided cavity,—not so large, it is true, as the tumor which has been removed, for the tissues contract at once, but still large enough to detain decomposing fluids and thus lead to septic poisoning.

Now, suppose that I fail in removing all of the tumor in this operation, what shall I do to avert this danger? I must make large, free incisions into the wall of the womb and remove as much as I can. I shall then give the patient ergot in the hope that the rest of it will come away, as the uterus is made to contract. The confining capsule having been divided, there is nothing to resist the force of uterine contraction. It is surprising to note how large a tumor may thus come through a comparatively small opening. When forced out into the vagina it may be easily removed at a subsequent operation.

I shall now examine the patient. I find the os so high up that I can barely reach it with my finger. I pass in the sound blindly, but guided by my finger, in the direction of the cervical canal, which it readily enters. It has passed into the uterine cavity to the depth of five and a half inches, which shows that this is a tumor of considerable size. The growth has the ordinary characters of a fibroid tumor. After incising the capsule with Adams's subcutaneous saw,—which in such a vascular organ as the uterus, containing erectile tissue, is no light matter,—I shall, by means of Thomas's serrated spoon, and other curettes, proceed to separate the growth from its attachments to the uterine structures. The saw makes a bruised wound, which is less likely to be followed by hemorrhage than the knife.

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The history of this case has led me to say, and to believe, that probably the operation in future for such cases will be oöphorectomy, rather than enucleation of the growth itself. This woman will have been subjected to four operations to remove this growth. Tumors of the womb are liable to be multiple, and in the operation of enucleation we may be able to remove some of the growths, while others will still remain to cause a return of the disorder. When the uterus ceases to be functionally active in the menopause, or becomes so after removal of the ovaries, these tumors are usually arrested in their development and may atrophy and disappear.

Last Sunday, in this building, I operated, in the presence of some members of the third-year class whom I invited to assist, upon a case of similar character, in which I removed the ovaries by abdominal section, the tumor being too large to be removed by the vagina. I was obliged to lift up the uterus with the large tumor out of the abdominal incision, in order to reach the ovaries behind it. It was troublesome, but thus far she has done very well.

You see that the tissues surrounding the growth are so vascular that the simple introduction of my finger is followed by considerable bleeding. I have provided this bowl of vinegar here upon the table, so that should the hemorrhage be more free than I like during the operation I shall have some injected. In the event of the failure of the vinegar to check it, Monsel's solution is also here, which can be diluted and injected, or applied upon a tampon. In one way or another we shall be able to get the bleeding under control. I prefer the former, as the iron solution makes such large tenacious clots as to give considerable difficulty in their removal, which by remaining might also favor septicæmia.

I have now cut into the capsule at the most dependent part of the growth. I am separating it from its adhesions by my finger, but I do not find it so easy to remove from the uterine wall as I expected: it does not shell out of its capsule as it should. Now, this is an operation that I consider a formidable one, because I must operate in the dark. I do not exactly know where the blood comes from, but I must get at it and check it the best way I can without being able to take up the isolated vessels as they are encountered. If I had cut into this with a knife, making an incision, I should have had much more bleeding. I am using the spoon-saw where the attachments are too strong for my fingers. I find that some of these adhesions are very dense; possibly the previous operation has led to inflammation, thus agglutinating the tissues. It is better to remove the entire growth at one sitting, if possible, rather than to leave it for a second operation.

There is a danger, in using my curettes, of getting into the cavity of the abdomen, as there is only a thin wall of uterine tissue between the tumor and the peritoneum. The opening made by such large instruments would be far more dangerous than that by the uterine sound, and would be likely to be followed by serious consequences.

The instrument I am now using I have found useful for separating these growths from the capsule. It is a sort of vectis, or lever, having a flat, broad, rounded end like a spoon-handle. It was originally made for the removal of the old-fashioned glass pessaries from the vagina. It is dull, and not likely to do any damage.

I have now separated the tumor on one side. Grasping the growth with the volsellum forceps, my assistant, Dr. Baer, is making traction upon it. I have, as you observe, provided a number of forceps and other instruments for traction, for my experience in other cases has shown that they will be needed. Here is one fenestrated like the obstetric forceps, devised for the purpose of holding the vaginal wall out of the way, when Sims's speculum is used. It is also a useful instrument for separating the tumor from the surrounding tissues; the end is blunt and rounded; it is not a cutting instrument. I have here another instrument, made expressly for making traction in these cases.

I find that the tumor is coming down, but it is breaking. Several pieces have been torn off by our traction. Some of these are round, and evidently are independent growths which, if left, would develop into large tumors, requiring further operation. This shows again that enucleation is less likely to give permanent relief than oöphorectomy.

The serrated curette of Thomas, which I am now using, is spoon-shaped, rough or serrated upon its edge, and is a valuable aid in the removal of these tumors from the capsule. Sometimes I prefer the smooth,

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blunt instrument, but the serrated spoon is often indispensable. I shall now use the obstetric crotchet, which sometimes also works admirably.

There has been considerable bleeding from some large veins, but it is getting less as the attachments are separated. One trouble here is the breaking of the tumor into fragments. Always work towards the tumor. If you go in another direction you may penetrate into the rectum, the *cul-de-sac* of Douglas, the abdominal cavity, or the bladder. I am working, as you know, upon a growth in the posterior wall of the uterus. I have not entered the cavity of the womb at all. It is hard work, but the perspiration on my face is caused more by my anxiety than by the labor.

While I pause a few moments to rest, let me remind you that, as usually described, there are three groups of fibroid tumors of the womb; but, mind you, it is not often that you will find a typical one of either class. These are (1) the submucous, starting under the mucous membrane and projecting into the cavity of the womb; (2) the subserous, growing under the peritoneum from the fundus of the womb; and (3) the intramural, developing in the muscular tissue of the uterine wall. These growths follow the law of growing in the direction of the least resistance, you observe. They differ in location, but otherwise they are exactly alike. I believe that in the majority of cases fibroid polypi develop originally from these submucous fibroid tumors of the uterus.

The most prominent symptom of the presence of a fibroid tumor of the womb is bleeding. Sometimes there is also pain, but usually repeated hemorrhages are more likely to lead your patient to seek treatment than any other symptom. The remedies I have spoken to you about frequently, ergot in large doses,—that is, sufficiently large to influence the growth,—and muriate of ammonia, are both good; combined they make a splendid team. I have known fibroid growths to disappear completely under their use, or at least to become so small that they can be no longer found, and to cease to give any evidence of their existence. I have also given ergotin hypodermically; but when the tumor is large, and the repeated bleedings are exhausting the patient, who is very anæmic and likely to perish unless quickly relieved (although they seldom do die directly from this cause), it is necessary, by operation, either to remove the growth by enucleation or to reduce its blood-supply by oöphorectomy. This woman, I think, would have died but for the previous operation. When you have decided upon operating, then comes up the question, Can the tumor be successfully removed by enucleation? Sometimes it cannot. There is a chance that it may be a multiple growth, and also that, if you remove only a portion, sloughing and decomposition may occur, and septicæmia may set in and carry off the patient. In this case, for instance, there are so many small independent growths that it makes me think that the operation will be less likely to prove ultimately successful than oöphorectomy would.

I have now taken away the greater part of the growth, and the remainder is so loose that I think I can twist it around and remove it. Some of the fragments show calcareous degeneration. As my hour has expired, I shall dismiss the class, but I hope at my next clinic to give a favorable report of the operation. In order to check any bleeding, I shall now inject vinegar, and if this should not prove sufficient I shall tampon the vagina. I shall not do so now, as she will be kept under observation in the hospital.

[The operation was concluded after the class was dismissed. The tumor weighed twenty-four ounces (one and one-half pounds). Its largest portion was a single fibroid growth, but it also showed a number of smaller independent tumors, some as large as a small egg. The uterus, which had become inverted by traction, was restored to its place. The patient recovered promptly without a bad symptom.—Rep.]

TRANSLATIONS.

The Temperature in Measles.—From the study of a large number of cases of measles occurring in the Bicêtre, in the section of epileptic children and idiots, Drs. Bourneville and Bonnaire (*Progrès Médical*) have been enabled to make some interesting and important observations. The temperature was carefully and systematically recorded, with the following general results:

The *period of incubation* could not be exactly assigned, on account of the rapid development of the epidemic, and on ac-

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count of the defective mental condition of the subjects. The *prodromic period* was better observed, and in a number of the cases a gradual and progressive evening rise in the temperature, with morning remission, was found. During this period the maximum temperature was 40.4° (104° F.), but generally the temperature oscillated between 39° and 40°. Wunderlich also noticed this early rise, and stated that "only very exceptionally does the fever at this stage ever attain to the maximum of the entire disease." It is soon followed either by a fall of from .4° to .8°, or by a stationary period during which it remains steadily at a fever-temperature. When there is a rapid fall, it might lead to the idea of the existence of an ephemeral fever, where the other symptoms are not sufficiently marked to guard against this error.

After this remission, or stationary period, there comes soon a new elevation of temperature, corresponding to the *period of eruption*. The temperature soon attains its maximum (40° to 41°), which exceeds slightly the early rise, though usually not more than a few tenths of a degree. This elevation is rapid, and the maximum is reached in twenty-four hours; rarely does it require two days. The highest temperature almost always coincides with the general extension of the exanthem, as affirmed also by Wunderlich. After this there is a fall. The *period of defervescence* in some cases immediately succeeds, and becomes continuous with this fall consecutive to the fever of eruption. In other cases the temperature again sustains a temporary elevation, though not so high as before, and for several days oscillates between 38° and 40°. In such cases, however, there are likely to be complications, or at least a persistence of the symptoms of the first period. The authors especially insist upon the importance of clinical thermometry as furnishing early indications of the appearance of complications.

THE INFLUENCE OF ACUTE DISEASES UPON EPILEPSY.—In the course of the epidemic of measles, above referred to, among epileptic and idiot children, Drs. Bourneville and Bonnaire observed that the acute disease exerted a favorable effect upon the convulsions, either reducing their frequency or arresting them altogether. In a work recently published, M. Séglas, from observations among epileptics in La Salpêtrière and Bicêtre extending over a number of years, concludes as follows:

1. Intercurrent diseases have, in the greater number of cases, a favorable influence over epilepsy.

2. In some this influence is only shown during the course of the complication.

3. In some this influence continues after the intercurrent disease has passed away, and it is in these cases that it may properly be said to modify the course of the epilepsy.

4. It is especially in acute diseases, provoking febrile reaction, that this modification is the most noticeable.

The authors of the former communications state that, as regards measles, the amelioration in the convulsive attacks in the epileptic idiots under observation was quite marked, but the influence was only exerted during the continuance of the fever. As soon as they returned to their usual condition of health the mental and neuropathic state was found to be exactly as it was before the appearance of the epidemic. —*Le Progrès Médical.*

GONORRHŒA AND JOINT-COMPLICATIONS —GONORRHEAL RHEUMATISM (1).—After a review of the literature of this subject, Dr. W. Nolen, of Rotterdam, is disposed to be sceptical as to the occurrence of true articular rheumatism as a complication, properly speaking, of gonorrhœa. He concludes that (1) occasionally gonorrhœa does become complicated with disorders which can be described as rheumatic. (2) In comparison with the frequency of the occurrence of the gonorrhœa, such accidents are exceptional. (3) The aforesaid disorders show the greatest variety in their extent and intensity: there is no such thing as a characteristic gonorrhœal rheumatism. (4) Since those persons who during an attack of gonorrhœa suffer with joint-inflammations are liable with subsequent invasions of gonorrhœa again to have articular seizures, it seems that the urethral inflammation does exercise some influence over the appearance of the complication. (5) The manner in which the gonorrhœa causes this complication is not clear. (6) Since the articular complication only very exceptionally occurs, and the symptoms show nothing characteristic, it can be concluded with certainty that the gonorrhœa attains the *rôle* of an occasional and not a determining cause. (7) The principal cause of the development of rheumatic complica-

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tions, therefore, must be looked for not in the gonorrhœa itself, but in the affected individual. (8) It is also to be borne in mind that persons who contract gonorrhœa are also very liable to be exposed to other sources of injury, such as cold, excesses in drink, fatigue, etc., and that in many cases of so-called gonorrhœal rheumatism there may be only an accidental coincidence of rheumatic disease and gonorrhœa. In those cases, however, where it is necessary to acknowledge that gonorrhœa may occasionally give rise to rheumatic complications, it may be explained through a reaction of the gonorrhœa upon the whole organism (it is known that gonorrhœa may cause a slight fever and gastric disorder), so as to affect the physiological condition of some of the tissues, and thus is able, in susceptible persons, to give rise to rheumatic affections.—*Deutsches Archiv für Klinisch. Med.*, vol. xxxii. H. 1 and 2.

PERIPLEURITIC ABSCESS.—The occurrence of a primary inflammation of the cellular tissue between the pleura and chest-wall, leading to the formation of abscess, has been asserted positively by competent authorities. In a communication by P. Martin (*Centralblatt für Chirurgie*, No. 36, 1882), two cases of peripleuritic abscess are reported in a boy of 5 years and a man of 34 years; in both cases, however, the peripleuritis had been preceded by a recent pleuritis, although in the interval the patients were in good health. Cases of secondary peripleuritis are especially apt to develop when inflammation occurs in a neighboring structure, as in disease of the vertebræ, the ribs, or the pleura; they must be of much more frequent occurrence than those of the primary form. Martin does not contradict the statements of good authorities as to the possibility of a true spontaneous or primary peripleuritis, but denies that the usually accorded symptomatology is of any practical value for the diagnosis and treatment of peripleuritic abscess, as compared with that furnished by the exploring needle and the knife.

PATHOGENY OF PEARLY EPITHELIAL TUMORS AND CYSTS OF THE IRIS.—In a note communicated to the Academy of Sciences, Paris, by Prof. Vulpian, an account is given of the results of a series of experiments made by Prof. E. Masse, of Bordeaux. Attempts at grafting fragments of the cornea or of skin into the iris, in rabbits, succeeded in a certain number in leading to the development of cysts. The experiments were conducted as follows. With a Beer's knife, a small shred of the cornea was shaved off from its lower part, and then introduced, through a puncture in the upper part, into the anterior chamber of the eye. This graft soon attached itself to the iris, and, losing its transparency, became vascularized from the vessels in the iris. In several experiments he has seen real cysts with transparent walls developing in the neighborhood of the graft, of which the origin should be certainly attributed to the corneal tissue thus abnormally implanted in the iris. These experiments may render important aid in solving the problem of the etiology of cysts and pearly tumors of the iris in man. M. Masse suggests that when in injuries of the eye involving penetrating wounds of the cornea with cutting instruments, if cysts or pearly tumors of the iris subsequently develop, their origin should be attributed to grafting upon this membrane certain fragments of tissues, either of the skin, the conjunctiva, or the cornea; and he claims that his later experiments prove that we can attribute this mode of origin to a certain number of cysts which develop in man consecutive to traumatism with a penetrating wound of the cornea.—*La France Médicale*, No. 10.

THE EXTENT OF ISOLATION REQUIRED BY ZYMOTIC DISEASES.—The Minister of Public Instruction addressed a communication to the Academy of Medicine, Paris, requesting information as to the duration of the time that it would be advisable to keep children from attending school after the contagious diseases. The following statement was prepared by M. Hillairet:

Smallpox, measles, and scarlatina require the children to be kept isolated and separated from others for forty days. For varicella the duration should be twenty-five days. The mumps are certainly contagious, and isolation should extend to twenty-four or twenty-five days.

For diphtheria, which is rarely seen in schools and colleges, the isolation should be forty days.

The same extent of isolation should be required for all cases, whether light or severe. If isolation cannot be perfectly maintained,—in a college, for instance,—the children should be sent away. Finally, before the children are allowed to associate

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with their comrades, their clothing should be disinfected, and they should have one or two baths with soap.—*La France Médicale.*

EXTIRPATION OF A KIDNEY.—Dr. R. Bruntzel, of Breslau, reports (*Berl. Klin. Wochenschrift*, No. 49) the successful extirpation of the left kidney in a woman 33 years of age, on account of a large tumor of the capsule. The tumor was a fibroma, and weighed thirty-seven and a quarter pounds: it had been first noticed five years before. The growth occupied a large portion of the abdominal cavity, so that the laparotomy was made by a median incision from the xiphoid cartilage down to the pubes: it was conducted with antiseptic precautions, and a Lister bandage applied after the operation. A mixed anæsthesia of chloral, morphia, and chloroform was employed. The patient nearly perished on the table, requiring hypodermic injections of ether and artificial respiration, which was obliged to be continued for three hours. The patient subsequently had double radial paralysis (reflex?), which passed off in six weeks from the right hand, but continues still in the left. The patient otherwise was restored to excellent health.

INFLUENCE OF FOWLER'S SOLUTION UPON THE HÆMOGLOBIN IN THE BLOOD.—From an investigation made to determine the effects of the medicinal administration of some remedies upon the proportion of hæmoglobin in the blood, Dr. Fenoglio, of Turin, concludes that the iron preparations vary considerably in their effects; Fowler's solution increases the hæmoglobin, and this becomes more marked the longer it is given. In spite of the general opinion to the contrary, the administration of Fowler's solution is indicated in anæmia, chlorosis, and in general in all conditions in which there is a decrease in the hæmoglobin, for the influence of this agent is very evident in increasing the proportion of the hæmoglobin; and, furthermore, its use increases the appetite and produces a general improvement in the bodily appearance and condition.—*Medizin. Jahrbücher*, 1882, H. iv.

THE INFLUENCE OF THE NERVOUS SYSTEM UPON PATHOLOGICAL CHANGES IN THE SKIN.—In a valuable contribution to the *Vierteljahresschrift für Dermatologie und Syphilis* (1882, H. iii.), Drs. Arthur Irsai and Victor Babesim, of Budapest, call attention to an important series of experiments upon animals, in which various lesions of the central nervous system produced pathological conditions of the skin. The influence of the sympathetic nervous system over the skin was especially studied, and the authors conclude that their experiments demonstrate a direct connection between disease of the sympathetic and certain affections of the skin.

THE ACTION OF ARSENIC UPON DIABETES.—Dr. Quinquand, in an article recently published in the *Bulletin Général de Thérapeutique*, reports the results obtained from the administration of arsenic to animals in which diabetes had been experimentally produced, and also to patients suffering with melliturìa. Fowler's solution was used in moderate doses. It was found that arsenic administered to diabetic patients usually produced a diminution of the daily amount of sugar excreted; but very often there is also a decrease in the quantity of water, and also a small but positive reduction in the urea. These results occurred uniformly in the animals experimented upon; they were less so in man, possibly because the doses were relatively smaller.

THE HYPODERMIC ADMINISTRATION OF POTASSIUM IODIDE.—At the hospital Lourcine, devoted to venereal diseases, experiments were made upon seventy-two cases of the effects of the hypodermic injection of iodide of potassium after the plan of Eulenberg and Thierfelder in Germany. It was found that a perfectly neutral solution containing eighty grains or more of the salt (.50 gr.) to the syringeful could be given without unpleasant consequences.

It is believed that in cases where an unconquerable intolerance of the stomach exists, or in those cerebral cases in which swallowing cannot be performed, and yet a rapid effect is desired, this method possesses advantages. Under other circumstances, and after the patient has become able to swallow, the ordinary method of administration by the mouth is preferable.—*Progrès Médical.*

EFFECT OF IODOFORM UPON TUBERCLE BACILLI.—Fränkel found, as a result of experiments upon tuberculous ulcers of the larynx, that the free use of iodoform did not destroy the bacilli, although it acted favorably on the progress of the ulcerative process itself.—*Berlin. Klin. Wochen.*

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PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, MARCH 24, 1883.

EDITORIAL.

THE GROWTH OF PUBLIC SENTIMENT IN FAVOR OF CREMATION.

A FEW words upon cremation in the way of comment are suggested by the case of the prominent philanthropist of this city whose remains were recently burned at Washington, Pa. It appears very evident that a great change is taking place in public opinion everywhere, in Europe as well as America, with regard to this subject of cremation. The burning of the dead is no longer regarded as so revolting and unnatural as to send a thrill of horror through the community at its mere announcement; on the contrary, it is now listened to without surprise, and it even appears in the daily papers merely as an item of intelligence, unworthy of special comment. This in itself is a significant circumstance. The late meeting of the Congress of Hygiene at Geneva, as at the former session, unanimously passed resolutions advocating cremation as the only proper means of disposing of the dead in crowded communities, and calling upon civilized governments to remove any legal restrictions in the way of its general adoption. Unfortunately, this method is illegal both in France and in England: in each, however, cremation societies have been in existence for several years past, which have received encouragement and support from many of the prominent men in both countries; and it now seems probable that their efforts to modify the laws against cremation will soon be crowned with success. Of the English society, Sir Henry Thompson is president; and the association has also upon its rolls many other names of distinguished and influential members. It is said that Gambetta belonged to the French society, and would have been cremated had it not been contrary to law; and this society is now engaged in a renewed effort to have cremation legalized in France. As the advocates of the measure get stronger, the efforts of the opposition seem to be gradually dying out. It is beginning to be more generally understood that the great object of cremation is to perform in a few hours a process of oxidation that would certainly require, under ordinary circumstances, a century to accomplish, and in many cases perhaps much longer. There is no essential difference between the two methods of disposal of the dead, except in the element of time. The objections urged against cremation have been principally sentimental; but these are seen to have arisen from a false idea of the procedure. The strongest argument that has yet been raised against cremation is that it may destroy evidence of crime. This is a real difficulty, but not an insurmountable one, for the cases in which exhumation is necessary are extremely rare; and in all cases where death occurred suddenly, or under suspicious circumstances, cremation might be deferred for six months or longer, the body being kept, in the mean time, in a vault or some similar temporary place of deposit. Indeed, it might perhaps meet the objections of those holding different views upon this subject, if all bodies were required to be kept for a period of several months prior to cremation.

Our crowded suburban and intramural cemeteries constitute a constant menace against the health of the community, by poisoning both the air and the water, and acting as centres for the spread of contagious disease. It need scarcely be said that body-snatching need no longer be dreaded when only the ashes of the dead are deposited in the cemetery. A cremation society, it seems, might well be

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formed in this city at the present time, as public sentiment is abundantly prepared for it. It is unfortunate that the enterprise of Dr. Le Moyne should be so distant as to render it inaccessible to many persons of moderate means that otherwise would avail themselves of its advantages. If a society should be instituted that would erect a convenient and accessible crematory furnace in the outskirts of Philadelphia, it could scarcely fail of immediate appreciation by the public, and there would be not the slightest doubt of its final success. The opinions of some of our prominent citizens are well known and have been publicly expressed with regard to this subject. How soon shall we have a Philadelphia Cremation Society?

THE MARINE HOSPITAL AND NAVY MEDICAL SERVICE.

DURING the late session of Congress there was an angry dispute, in which the Marine Hospital Service, in the person of its ambitious chief, took a part, which ought to be known to the profession; so that we make no excuse for briefly calling attention to the matter even at this late date. The history of the affair is as follows.

First, the Secretary of the Navy, at the instigation and in the interest of an unnecessarily large number of young line officers (who are without commands, and for whom there is really no employment in the present diminished state of our navy), attacked the Revenue Marine by bringing in a "bill" to absorb this body in order to get possession of twenty-five or thirty very useful revenue vessels, which were just what was wanted as commands for the unemployed young men in his department. This act towards a sister branch of the government deserved rebuke for its selfish object; but, in order to cover up the real object,—*i.e.*, additional vessels for the unemployed line,—line officers undertook to collect facts and figures and to set forth the advantages that would accrue to the staff departments by absorption of the same departments in the Revenue Marine; and the Engineer and Medical Departments of the navy, which did not desire or ask for such transfer or absorption, have been made to suffer, in the public press and the reports of the Revenue Marine. Surgeon-General Wales and the Bureau of Medicine and Surgery took no action in this matter; but a midshipman undertook to set forth the advantages that would arise from a transfer of the Marine Medical Department to the navy, and General Hamilton then attacked the medical corps. Making full allowance for the natural indignation of the Treasury Department and its officials, we think that Dr. Hamilton, in publicly comparing the professional and financial management of hospital patients in the two services, unreasonably washes linen in public, and makes comparisons which are uncalled for and unprofessional.

Perhaps we are inclined to look with suspicion upon the Marine Hospital Service, because upon it largely rests the odium of having caused the practical abolition of the National Board and thereby gravely injured the highest interests of medicine in this country. The navy of the United States seems to us the most pitiably mismanaged department of the government, and to have transferred the Marine Hospital Service, the Coast Survey, and the Revenue Service to it would have been disastrous; but this does not excuse the self-exaltation upon the part of the supervising surgeon, or the belittling by him of brother professionals. To a civilian, accustomed to the amenities of professional life, it seems very strange that when a doctor becomes a politician he should lose all remembrance of the code under which he first drew his professional breath.

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THE readers of the *Philadelphia Medical Times* may remember an editorial published some months since in our columns, entitled "How they make Cod Oil at Swampscott," and will share our amusement at seeing it quoted in full, as an original article from the *Edinburgh Medical Journal*, in the *Boston Medical and Surgical Journal*. Starting into life near Philadelphia, becoming in a few weeks an aristocratic citizen of the queen's empire, with all traces of its plebeian origin carefully hidden, this classical (?) article finds, we trust, a peaceful resting-place in the hub of the universe, a few miles from the busy village which was the original cause of its being.

LEADING ARTICLES.

CONVALLARIA MAJALIS.

IN 1859 G. F. Walz discovered in this plant two active substances, *convallarin* and *convallamarin*. Of these the first is crystalline, insoluble in water, and, according to the experiments of Dr. W. Marmé (*Schmidt's Jahrb.*, Bd. cxxxiv. 166), when taken in doses of three or four grains, acts as a simple purgative. The glucoside convallamarin is soluble in water, and is the principle to which the plant owes its action upon the circulation. Marmé found that it kills by a direct action upon the heart, and in moderate doses first slows and then quickens the pulse; previous division of the vagi did not interfere with the development of these phenomena. The chief studies upon the physiological and therapeutic action of the lily of the valley are those of Prof. Germain Sée (*Bull. de l'Acad. de Méd.*, No. 27, 1882, p. 767) and of S. Isaew (*Hoffmann und Schwalbe's Jahrb.*, 1883, 122, from the Russian). Prof. Sée finds that in the dog it first slows the action of the heart and increases the blood-pressure decidedly, the respirations at the same time becoming fuller and a little less frequent. If a toxic dose has been given, the heart's beats become very rapid and irregular, the arterial pressure still being much above normal; finally, the pressure begins to fall, the cardiac pulsations to grow more feeble, and death occurs through syncope. It is stated that the pneumogastric nerves are weakened, but never paralyzed, whilst the general nervous system is not affected. In man the action of the drug upon the circulation is as in the lower animals, and there is said to be usually produced profuse diuresis and sometimes purging. In Isaew's experiments upon frogs with convallamarin, the heart was arrested in ventricular systole by two milligrammes of the pure convallamarin, the frog continuing to live for a long time, the remedy seemingly having no effect upon its general nervous or muscular system; isolating the heart had no effect upon the action of the poison. In the dog the phenomena of convallamarin-poisoning were as described by Prof. Sée, it being further noted that the pneumogastrics were not affected, that the pulse was often dicrotic during the stage of rapid cardiac action, and that the final arrest was diastolic, the heart-muscle not being able to respond to the most powerful galvanic stimulation. The observation that the heart of the dog is arrested in diastole is probably incorrect, as Dr. I. Ott has found that the arrest is systolic (*Archives of Med.*, Feb. 1883), and it is highly improbable that the action on the frog's and that on the dog's heart should be so diverse.

It is evident that convallamarin acts almost exclusively upon the heart and its contained ganglia, and possibly also upon the vaso-motor system, although concerning this we have no definite knowledge. Its action is evidently stimulant, and resembles in some respects that of digitalis.

The lily of the valley is said to have been long used by the Russian peasantry for the relief of dropsy, and in 1880 Drs. Troitzky and Bojojawlewsky called attention to it as a valuable remedy in cardiac valvular disease, especially when associated with dropsy (*Wratsch.*, 1880, 47). Prof. Sée recommends it in palpitation of the heart, in cardiac dilatation, fatty degeneration, and other forms of cardiac weakness, also in valvular lesions with failing heart-power; in a word, in the class of cases in which digitalis is now used. When there is dropsy, its very positive diuretic action renders it especially valuable, and in some cases it purges freely, probably through the convallarin. The value of the remedy has been confirmed by Prof. H. Desplats (*Journ. des Sciences Méd. de Lille*, Oct. 1882), and by several American

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practitioners. Although condemned after trial by Dr. B. Stiller (*Wien. Med. Wochenschrift*, Nov. 1882), the remedy certainly should be carefully studied, first physiologically and afterwards clinically. In cases in which it has failed there is reason for suspecting that the preparation used has been a bad one. Dr. Marmé found that the fatal dose of convallamarin was, for the dog, 0.015–0.03 grm.; for the cat, 0.005 grm.; for the rabbit, 0.006–0.008 grm. Prof. Sée gives, of an aqueous extract of the whole plant, from fifteen to twenty-three grains a day; Bojojawlewsky, each day an infusion representing from fifty to one hundred grains of the plant.

NOTES FROM SPECIAL CORRESPONDENTS.

CHICAGO.

A YOUNG and favorably-known physician of our city has of late met trouble and annoyance in a form, though not uncommon, always interesting to the profession.

Dr. Charles W. Purdy had during December last been giving professional attention at his office to a Mr. Fred. Smith. Early in January Mr. Smith was compelled to take to his bed, in consequence of some acute character which his disease had assumed. New features developed, and Mr. Smith's condition grew very serious, and the friends, becoming alarmed, called Dr. Ludlum (homœopathic), who, rumor has it, criticised Dr. Purdy's treatment and diagnosis. A Mr. Chumasera, a particular friend of Mr. Smith, became very indignant, and publicly denounced Dr. Purdy in unmeasured terms. The facts quickly coming to Dr. Purdy's ears, a suit was at once commenced against Mr. Chumasera, he being responsible, for damages in twenty thousand dollars. The result has been a heated and somewhat bitter newspaper correspondence, and the exhumation of the body of Mr. Smith for careful examination. The post-mortem was conducted by four regular and four homœopathic physicians, resulting in the finding of nothing that could clearly account for death. The suit goes on. Let us hope that the future proceedings may be conducted with dignity, and with an eye solely to the vindication of right. It may be proper to state that professional men who are familiar with all the facts approve Dr. Purdy's diagnosis and treatment.

One of our oldest surgeons, a professor of surgery in the veteran school, while conducting a surgical clinic last week, introduced a little patient who was suffering from a nævus of the face. The professor, after demonstrating the tumor to the class, and describing the several modes of operative procedure, proceeded to inject a few drops of the solution of chloride of iron into the tumor. Immediately there was a slight convulsion, and the child was dead. Though used a number of times by this operator during a practice extending over thirty years, this is the first accident attending his use of this remedy. It is one of those occasional unanswerable arguments which come up against the use of dangerous means to an end, when safer agencies are available.

The College of Physicians and Surgeons celebrated their first commencement, at Central Music Hall, on the 13th instant, graduating a class of fifty-two. A banquet was given in the evening at the Sherman House.

March 15, 1883.

JAPAN.

THE following Japanese letter is so delicious that we take the liberty of publishing it, stating that it is a *bona fide* document, and that we should be very proud to be able to answer it in as good Japanese as it is English:

"TOKIYO, 27th Jan. (16th of Meiji).

"DEAR SIR,—I am very glad to say our happy New years come again, and I wish to have your kindness as you did before. I intended to see your newspaper, and change with my own *Iji Shinbun*, which issued thrice a month already send into your company. If you allow my hope, I shall saticify with my gratitude.

"I reamains, Dear Sir,
"Your faithfully,
"OBATA JINZABARO,
"Ed. of Iji Shinbun.
"SHITAYA NERIBEICHIYO No. 61, TOKIYO (JAPAN)."

PROCEEDINGS OF SOCIETIES.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

A CLINICAL conversational meeting of the Society was held at the hall of the Society on February 21, 1883. Dr. O'Hara read, on behalf of Dr. Kilduffe, a note on "A Case of Pyæmia extending over a Period of Six Months, followed by Recovery" (see page 427).

TREATMENT OF PURULENT PLEURAL EFFUSIONS.

Dr. James C. Wilson presented two patients illustrating the successful treatment of purulent pleural effusions. The first patient, G. E. C., aged 25, entered the Jefferson Medical College Hospital, December 19, 1882. He exhibited great distention and deformity of

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the left chest; dulness on percussion over all that side except under the clavicle, and posteriorly over the apex; vocal fremitus absent. The right side was resonant on percussion. The heart was displaced to the right. The family history of the patient was good. His sickness dated from an acute attack the previous year, and before coming to the hospital the chest had been twice aspirated, eight pints of pus having been removed on the first occasion, six pints on the second. On December 20, Dr. Wilson aspirated on the seventh interspace, and removed eighty-six ounces of pus. On December 24 a circumscribed abscess in the chest-wall, not communicating with the pleura, was opened. On January 1, 1883, he was tapped with a large trocar and canula, the latter being used simply for the purpose of introducing a flexible gum catheter as a drainage-tube. Fifty-eight ounces were removed at this tapping. The chest had by this time become somewhat flattened, and the heart was gradually approaching its natural position. The cavity was now washed out with a solution of corrosive sublimate, about one part in fifteen thousand of water. The cavity continued to decrease, and the patient to improve, until the present time. Only two ounces of solution can now be injected.

The second patient, W. T., aged 16, has also no unfavorable family history. The present trouble dates from April, 1882, and began with sharp pain in the left side, cough, expectoration, and distention of chest. He was aspirated about the latter part of May by an attending physician, who removed a pint of pus. About the 1st of July a fistulous opening was formed spontaneously in the region of the apex of the heart, which had been displaced. In a few days another opening was formed higher up, and in August a third opening on the median line at the lower part of the chest. At the time of entering the hospital, November 20, 1882, these sinuses were all discharging; the heart was displaced strongly to the right; the left side showed percussion-dulness. On December 1, 1882, he was aspirated, and twelve fluidounces of pus taken out. On December 14, Dr. Allis, at Dr. Wilson's request, resected about one inch of the seventh rib in the axillary line. The pleura was not at this time incised. On December 12 a drainage-tube was put in, and the cavity washed out daily with a solution of corrosive sublimate, one to fifteen thousand. At the present time he is markedly improved. The cavity is small, and the injected water comes away clear.

Dr. Wilson wished to call particular attention to the disinfecting and antiseptic qualities of corrosive sublimate, which he had used in these patients. He had employed this agent in varying proportions, from one part to fifteen thousand of water up to one part to eight thousand, and regarded it as superior in efficacy to any of the substances in common use for the purpose of checking the suppurative process in cases of this kind. He dwelt upon the advantages of using the aspirator in certain cases as a preliminary measure before performing an operation to establish a permanent fistula, definite information as to the character of the effusion, the resistance of the tissues, etc., being thus obtained, and the risk of the sudden evacuating of very large effusions being lessened.

Dr. O'Hara inquired why the natural opening existing in the second case had not been enlarged. Was there any special reason for not doing so, thus obviating the resection of the bone? In regard to the corrosive sublimate injections, he wished to know the strength of the solution used. Solutions of corrosive sublimate have not been found, as applied to external wounds by some surgeons, effectual antiseptic applications, as they have not prevented septic conditions from ensuing.

Dr. Eskridge said that the credit of using corrosive sublimate solution as a germicide for washing out the chest-cavity was due to Dr. Wilson. It is very powerful in this respect, and may be used externally, on the unbroken skin, of the strength of four grains to the ounce of water. It is better than carbolic, boracic, or salicylic acid, and many others. Cases like these presented to-night are, however, affected by circumstances. The amount of effusion influences the results of the tapping. A case had occurred at St. Mary's Hospital, from which two gallons of purulent fluid had been drawn off at one time. Free communication with the outside was established, and the cavity daily washed by means of a one-per-cent. solution of carbolic acid. The patient died in two weeks. Post-mortem examination showed the lung compressed to the size of the fist, and a pyogenic membrane lining the entire left pleural cavity. The lungs could not expand nor the walls of the chest contract sufficiently to fill up the cavity. In the cases shown to-night no such amount of effusion had existed. Dr. Eskridge inquired if Dr. Wilson had ever used capillary tapping, a method which he had used himself in a case of ascites, having drawn off two gallons. Such a method might be applicable to the cases here presented, as the first fluid is not very thick. Another method is the antiseptic method, which consists in inserting a canula or rubber tubing, protected by carbolized lint.

Dr. Nancrede called attention to a complication, which was rare in these cases, but of which he had met with an instance. This was either a co-ossification of the ribs, or, perhaps, calcification of the pleura. It occurred in a child, and was not known until an attempt was made to introduce the canula, when the resisting bone-like structure was found. It became necessary to use a metacarpal saw and cut away a portion of this structure.

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Dr. Wilson said that in the second case the natural opening seemed at first thought the most suitable channel through which to introduce a catheter for permanent drainage; but its position in reference to the heart is such that operative interference or even the presence of a tube might be dangerous. Besides this, the track was very crooked and irregular. He had therefore preferred to establish an artificial fistula at a more desirable point. He has had no experience with capillary tapping. In cases of large effusion he preferred large openings, as the washing could be done more satisfactorily. With regard to Dr. Nancrede's remarks, Dr. Wilson recalled a case that he had seen post mortem, in which calcareous degeneration of the thickened costal pleura had occurred. In the case of the boy presented to-night, resection was made necessary by reason of overlapping ribs.

NEW YORK ACADEMY OF MEDICINE.

STATED MEETING, MARCH 1, 1883.

FORDYCE BARKER, M.D., LL.D., President, in the chair.

DR. KEARNS, of Pittsburg, was invited to take a seat on the platform.

Dr. LAURENCE JOHNSON related a case illustrating the possible dangers of intra-uterine injections by the use of Chamberlain's tube. The case was one of puerperal fever, for which he made intra-uterine injections during about a week from the third day after delivery. The greatest care was exercised in the introduction of the tube and in regulating the force of the injection. No accident happened until about the sixth day, when, after having exercised the usual care, the tube on being withdrawn was found stained with blood, and a little bleeding followed. The patient had a chill, the temperature went up nearly to 107° F., the pulse to 160, and this condition continued for two or three hours, and then subsided. The patient had done well since.

THE PRESIDENT remarked that within the past few years he had had occasion frequently to express a word of caution to those whom he had met in consultation, with regard to the continued use of intra-uterine injections in the treatment of septicæmia and puerperal fever beyond a certain period of time. It was well known that the uterine sinuses were ordinarily closed within three or four days after delivery. It had happened to him several times to see cases where the evidence had been conclusive to him that injections with the Chamberlain tube, a most excellent and useful instrument, had been continued too long, and, for this reason, that the uterine sinuses, after having become closed by nature's methods, were reopened, and a channel was made through which absorption could take place, and the uterine injection had in some cases, he believed, been the source of reinfection.

The scientific paper of the evening was then read by Dr. ISAAC E. TAYLOR, on "*The Naturally Faulty or Contracted Pelves; with the History of a Case of Labor, the Non-Delivery of the Child, and the Death of the Mother, after Craniotomy and Cephalotripsy.*"

The faulty or contracted pelves to which the author referred included the equally contracted, or justo-minor, the infantile, or immature, and the masculine, or funnel-shaped.

The patient, the history of whose case he related, was 29 years of age, a primipara, whom he saw on July 28, 1882, in consultation with Drs. Waterman, Judson, and others. At that time the pains were of short duration, occurring at intervals of ten minutes; the os was dilated to about the size of a half-dollar. The head was in the left occipito-anterior position. Ergot caused little advance. One-third of a grain of morphine hypodermically gave the patient some rest. The next morning the os was widely dilated. The head was still at the brim. The forceps were applied by Dr. Simmons, but without effect. Dr. Judson then made an unsuccessful attempt at version. Craniotomy was performed in the afternoon, while the head was at the superior strait, the transverse diameter, brow presentation. The cephalotribe was then applied, and the brain was more freely evacuated. Traction was made for fifteen or twenty minutes, but no advance was made. On examination immediately afterwards, the cranium was found to have resumed the shape it presented before the instrument was applied,—a fact which Dr. Taylor believed to be of not unusual occurrence. A long narrow-bladed forceps was applied, the head more securely fixed, and a right-angled blunt hook was inserted into the child's mouth. Meigs's embryotomy forceps were applied, and they succeeded in bringing the head into the inferior strait, and finally delivering it, at 6 P.M., after three hours' trial. Dr. Taylor believed that they had to deal with a generally contracted or faulty pelvis. The canal was so completely filled by the body of the child that it was impossible to make use of any means by which to bring down the arm. After an hour spent in ineffectual attempts at extraction of the shoulders, the mother expired at 7 P.M.

In his remarks upon the case, Dr. Taylor expressed the belief that the equally contracted pelvis occurred more frequently than those forms generally considered to be due to some vice of constitution, as rachitis, malacosteon, etc., to which far more attention had been paid hitherto by the profession. But, while the deformity was met with much more frequently than was supposed, as a general rule it gave no positive evidence or even suspicion of its presence before labor. The funnel-shaped and the equally contracted pelvis had been regarded, along with the infantile form, as

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due to an arrest of growth or to some impairment of the constitution; but, as a matter of fact, it was exactly the reverse, the bony union taking place at an early age and being indicative of a healthy, not an impaired, constitution. That the equally contracted pelvis did not necessarily go with smallness of stature was evident in the fact that many women of deficient stature gave birth to well-developed children with comparative ease. This fact was illustrated in the case of a girl, twelve years of age, who some years ago at Bellevue Hospital gave birth to twins without the least amount of trouble, labor lasting not longer than an hour.

Velpeau had made the remark that he had not known of a case in which the form of pelvis under consideration had offered any serious obstacle to delivery, but within a few years afterwards he met with two cases, in one of which the patient died under delivery, and in the other Cæsarean section had to be performed. Many cases of difficult labor, in which the obstacle to delivery was probably attributed to the large size of the child's head, to imperfect ossification, to largeness of the shoulders, or to other causes, and in which instruments had to be resorted to in effecting delivery, were probably cases of unrecognized equally contracted pelvis.

The diagnosis of the equally defective pelvis was hardly ever made before the necessity for the use of instruments was recognized at labor. The position of the head might aid somewhat after delivery, Some knowledge might be derived from the form the cranial bones had assumed, an excellent illustration of which fact was seen in the specimen presented. The author attached little practical value to the various methods of pelvimetry which had been proposed. Probably the most accurate estimate could be formed by the introduction of the whole hand into the pelvis. If the hand could not be rotated freely, it might be assumed that the diameters were not equal to those of the normal pelvis. The most useful method for the measurement of the outlet was probably that of Breisky.

With regard to procedures, the use of the forceps was almost totally or entirely impracticable. If craniotomy had been performed, version might possibly succeed. If the case were seen early, while the head was resting in the pelvic cavity, Cæsarean section might be performed; otherwise laparotomy or symphyseotomy would be the operation which he would select,—preferably that of symphyseotomy.

DISCUSSION.

Dr. E. A. JUDSON, who had seen the patient, reviewed the clinical history of the case, and spoke of the difficulties which he encountered in the attempt to perform version. One of the most interesting questions which had arisen in his mind in connection with the case was the possibility of making the diagnosis of the existence of a faulty condition of the pelvis. The restrictions which Dr. Taylor had put upon the value of the different methods of pelvimetry seemed to him to be just. He referred to the method of Carl Schroeder for determining what he called the diagonally conjugate diameter by passing the two fingers so that the ulnar surface of the middle finger should rest against the promontory of the sacrum, then measure on the index finger the distance between this point and the pubic arch. This diameter having been obtained, it usually bore a certain relationship to that of the other diameters of the pelvis. He believed that some information might be obtained by abdominal palpation. With regard to external pelvimetry, Baudelocque's method was probably the best.

Dr. E. L. PARTRIDGE had observed that in the cases of this form of faulty pelvis in which he had found it necessary to perform craniotomy and cephalotripsy the subject had menstruated at quite an early period, and he thought this clinical fact might have some relation to the early ossification of the bones of the pelvis, and prove of some value, when it existed, in leading us to suspect that such deformity of the pelvis might be present. It had been observed in not a few cases that a difficult first labor had been followed by labors comparatively easy; and this might perhaps be accounted for by the fact that the deposit of salts of lime in the bones of the infant of a primipara was greater than in that of a multipara. He had found that the application of the cephalotribe after the delivery of the head was of aid in the delivery of the shoulders.

Dr. H. J. GARRIGUES thought that the diagnosis of faulty pelvis could be largely made out by external methods, one of the best of which was that of Baudelocque. He had found it easier to measure the transverse diameter of the pelvis than the conjugate. With regard to operations, he should consider them preferably in the order mentioned: first, gastro-elytrotomy; second, under certain circumstances, Cæsarean section, not according to the old method, but according to the methods more recently described in monographs; third, Porro's operation; and, last of all, total extirpation of the uterus.

THE PRESIDENT called attention to the important practical point that the general form and size of the patient furnished very slight indications with regard to the pelvic conformation. Doubtless all had been consulted more or less frequently by persons somewhat defective in figure with regard to the probability of their going through labor with safety. He had not infrequently known persons under five feet two inches in height to have a perfectly formed pelvis and to give birth to healthy and even large children. Again, he had frequently been consulted by those who in early life had suffered from antero-posterior

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and lateral curvature of the spine, and probably also from hip-joint disease, with regard to whether it were probable they could go through labor, and in some cases he had made a careful examination by the various means alluded to by the author of the paper, and had been enabled to form a pretty accurate estimate as to the pelvic diameters and the probable result of labor, but not always; oftentimes he found it impossible to do so. Some years ago, a physician brought a lady to his office who had both lateral and antero-posterior curvature of the spine, and who in early life had also had hip-joint disease, and she was then at about the fifth month of pregnancy. He could discover no deformity within the pelvic cavity. Afterwards her physician wrote him that she had given birth to a child weighing ten pounds and a half before he could arrive at the bedside, the entire duration of labor being not more than two hours. On the other hand, a woman of handsome figure, large in size and well formed, had been delivered with the greatest difficulty, after craniotomy and cephalotripsy, by a celebrated French accoucheur, and was six months in convalescing. In a subsequent pregnancy Dr. Baker induced labor at five months and a half. Three years later, becoming pregnant a third time, and being anxious for an heir, her physician allowed pregnancy to go on until the seventh month. Labor was then induced: rupture of the uterus occurred, and the patient died undelivered. The President thought we should be extremely cautious in promising a favorable result in any case, even after making a most careful examination, for it was not always possible to determine the exact state of the pelvis.

Dr. TAYLOR, in closing the discussion, directed attention to the subject of the naturally faulty or contracted pelvis from a gynæcological point of view, and said he believed that this condition was the cause of many cases of uterine displacement which had erroneously been attributed to disease in the womb itself.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

STATED MEETING, THURSDAY, MARCH 1, 1883.

THE PRESIDENT, R. A. CLEEMANN, M.D., in the chair.

DR. W. GOODELL presented the specimens and reported a case of

DOUBLE ENUCLEATION OF UTERINE FIBROIDS.*

In commenting upon this case, Dr. Goodell remarked that the to-and-fro linear movement of the saw made it a very efficient instrument for working in narrow channels, and that it had the further merit of lessening the amount of hemorrhage. He now used no other instrument for incising the capsule of fibroid tumors. The history of this unique case had somewhat shaken his confidence in the operation of enucleation, because, since the womb is affected usually with multiple fibroids, some one of these must invariably be left behind, and a second operation may become needful. He believed that in these cases oöphorectomy, as a safer and more sure remedy, had a future before it. He had, in fact, performed the operation four days ago on a lady who was so feeble from prolonged hemorrhage that he did not dare to remove the fibroid by enucleation, which is a more prolonged operation and attended by a greater loss of blood. She was doing very well indeed. For the same reason, not daring to enucleate, he had early last year removed both ovaries for a bleeding fibroid, but after a remission of several months the hemorrhage returned, and he will probably have to perform enucleation or hysterectomy.

Dr. B. F. BAER inquired, if the case in which hemorrhage returned after oöphorectomy was not of the submucous variety, ought not the operation to be limited to the interstitial and subperitoneal varieties, where enucleation is not possible? In one case reported by Dr. Byford, of Chicago, a uterine (submucous) fibroid went on increasing and hemorrhage continued after oöphorectomy.

Dr. GOODELL, from *a priori* reasoning, would expect less favorable results in submucous tumors, as they are more like polypi in their characters and would be more likely to continue to bleed. The case referred to in which oöphorectomy had failed was of the submucous type, and could have been removed by division of the mucous membrane and enucleation, had the patient's condition permitted it.

Dr. B. F. BAER narrated the history of a case in which

INDUCTION OF PREMATURE LABOR FOR THE RELIEF OF SUPPRESSION OF URINE

was considered necessary. The case occurred in the practice of Drs. Marcy and Mecray, of Cape May, N.J. About the sixth month of pregnancy, a general œdema was noticed, and the urine contained considerable albumen and a few casts. The amount of urine passed diminished rapidly, while the proportion of albumen increased and the patient became weak and anæmic. Every means was tried to increase the quantity of urine, but without avail. Among the remedies used were a wide range of diuretics and hydragogue cathartics with Basham's mixture. A sudden suppression of urine occurred at eight months, and but four ounces were passed in forty-eight hours; this became solid when heated: headache and spots before the eyes were now added to the other symptoms; a grumous discharge from the uterus had been noticed for

* See Hospital Notes, page 435, for report of the operation upon this case.

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a week, and convulsions seemed threatening. Dr. Baer was called in consultation, and he agreed with them as to the advisability of inducing premature labor. A No. 9 flexible catheter was warmed and softened, and was, after great difficulty, introduced between the membranes and the anterior wall of the uterus. The cervix uteri had been lacerated in a previous labor, and was hard and small. Pains of a natural character followed immediately upon the introduction of the catheter. After some hours the pulse became weak and the patient faint; the os was but slightly opened, and it was considered advisable to administer stimulants and use Barnes's dilators and the Hodge forceps; a dead child was speedily extracted. The latter had been alive in the morning. Four hours after delivery, urine was secreted, and in two days the albumen had entirely disappeared. The patient recovered.

Dr. DE F. WILLARD reported a case of

INDUCED PREMATURE LABOR NECESSITATED BY GREAT ŒDEMA OF THE LABIA MINORA.

The patient, probably over 40 years of age, had been married about one year, and was pregnant with her first child. She suffered from headache, her feet and eyelids were swollen, and her urine showed one-sixth albumen and contained casts and blood-corpuscles. Basham's mixture, diuretics of every kind, diaphoretics, hot-air baths, hydragogue cathartics, and tonics were used, without a satisfactory result. Digitalis infusion and jaborandi alone gave a very temporary relief. The patient soon after her first visit called attention to the condition of the labia minora, which were found to be enormously swollen, shining, tense, and pitting on pressure. The urine amounted to from fifteen to thirty ounces per day, and steadily decreased in quantity. The œdema of other portions of the body decreased under the use of digitalis, but that of the labia increased. The patient could lie only upon her back, with the knees drawn up and as widely extended as possible; the pain was great and constant. Lancet-punctures were made, with temporary relief. The patient was steadily failing: her pulse was 150 per minute. An erysipelatous blush made its appearance and rapidly spread to the abdomen and thighs. Premature extraction of the child offered the only chance, and was at once performed. Gestation had reached eight months. It was a difficult task, as the labia were five inches in depth. Barnes's dilators and the Hodge forceps were used, and delivery accomplished in two hours. The child was dead, and the mother died three hours later.

W. H. H. GITHENS,
Secretary.

"THERE are two boating associations here," wrote a Japanese student home, "called Yale and Harvard. When it rains, the members read books."

REVIEWS AND BOOK NOTICES.

A TEXT-BOOK OF PATHOLOGICAL ANATOMY AND PATHOGENESIS. By ERNST ZIEGLER, Professor of Pathological Anatomy in the University of Tübingen. Translated and Edited for English Students by DONALD MACALISTER, M.A., M.B.

The fact that Prof. Ziegler's book has reached a second edition in Germany is of itself an evidence in favor of the author's work. The volume before us is a translation of the first part,—on general pathological anatomy and pathogenesis,—and is divided into seven sections,—malformations, anomalies in the distribution of the blood and of the lymph, retrogressive disturbances of nutrition, progressive or formative disturbances of nutrition, inflammation and inflammatory growths, tumors, and parasites.

It is seen from Prof. Ziegler's introduction that he completely ignores the humoral theory of disease, since he considers all diseases to have a local seat in some definite cell-group, and that anatomical tissue-changes lie at the bottom of the morbid phenomena observed during life. That these tissue-changes are not always discoverable, he thinks, is referable to one of two things: "either the difficulties in the way of discovery are so great that we can only in certain favorable cases, not yet met with, succeed in overcoming them; or that the tissue-change we are seeking eludes our optical appliances, inasmuch as it is not a change of gross structure, but one of chemical constitution and metabolism." Those who have followed the developments in the study of pathological anatomy cannot but have observed that diseases, which were formerly, of necessity, classified symptomatologically, are now arranged according to anatomical characteristics. It is true every morbid action cannot as yet be connected with a definite anatomical change. This, however, does not prove that such a change is not present: it is only an evidence of our inability to discover what special tissue- or cell-growth is implicated.

The section on malformation is well arranged, very concise, but fuller than similar sections in English works of this class, and is, on this account, a most valuable portion of the book.

Sections 2, 3, and 4 present in a very clear and comprehensive manner the various subjects of which they treat. The most advanced views on these topics are given, and conclusions are drawn which in every case show that the author has carefully studied and thoroughly investigated the subjects under consideration.

Section 5 treats of inflammation and inflammatory growths. The views here given in regard to inflammation are in many respects different from those accepted by the majority

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of English and American writers. Thus, "the slowing of the blood-current, the dilatation of the vessels, the peripheral disposition of the white blood-cells, the migration of these from the capillaries and veins, and the migration of the red cells from the capillaries, are all of them referable to a molecular alteration in the vessel-walls." Therefore Ziegler concludes that "any injurious agency which is capable of altering the blood-vessels in a particular way is capable of producing inflammation." Exactly what this molecular alteration consists in we are not told, since it is said it cannot be histologically demonstrated; but we are to suppose that the vessel-wall becomes more permeable by its elements becoming in some way loosened; the cementing substance which unites the endothelial cells seems partially to give way.

According to our author, the effect of inflammation upon the tissues which are the seat of this process is the very opposite to that which is attributed to it by almost all writers upon this subject. It is said not to determine a proliferation of the cells of the part, but only their degeneration and death. He says, further, that there is no such thing as an inflammatory stimulus, and that multiplication is never induced by excitation of the cells outside of the vessels. Pus-corpuscles are considered as solely derived from the blood, and cells of the lymphoid type are never produced from fixed tissue-cells. This view of the origin of pus-corpuscles we cannot accept. That the white blood-corpuscles are a source from which pus-corpuscles are obtained is certainly true, but that it is exclusively so is just as true. The fixed cells of all tissues not only do not participate in the inflammatory process, but, from our observations, which are in accord with those of most pathologists, they furnish the greater number of pus-corpuscles, and are active elements in the reparative process of inflammation.

Inflammatory growths are described as granulomata. They are further said all to possess the clinical character of infectiveness, and most of them may be transferred from one person to another by inoculation. This group of infective granulomata includes tuberculosis, syphilis, leprosy, lupus, glanders, and actinomycosis,—all of which affections are said to be due to the invasion of the body by a virus or poison derived from the outer world or from the body of another person.

The author's views upon tuberculosis are those of the advanced school,—that is, he is a firm believer in the germ-theory of this disease, and says, "It may therefore be accepted as an established fact that tuberculosis is an infective disease induced by the presence of a specific bacillus." That there is such a germ as the Bacillus tuberculosis, or, rather, that there is a bacterium, and that it is to be found in the tuberculous formations, we are convinced from personal observations; but that it is the specific cause of tuberculosis we are as yet undecided to admit. It must, however, be confessed that this claim is gradually becoming more powerful, and many of our best investigators have acknowledged its truth.

The section on tumors is an excellent one, and should be carefully studied by all pathologists. The classification of these formations is, as far as possible, based upon their histogenesis, and their origin is always from a similar tissue. Thus, a connective-tissue growth never has its origin from any other tissue than connective tissue, and an epithelial formation is invariably derived from epithelium. The etiology of tumors is fully considered, but has resulted in no very definite conclusions. Local hyperplasia is objected to on anatomical grounds. Inflammatory origin is excluded, owing to the process of neoplastic histogenesis being something quite different from the formative processes which originate in inflammation. The more recent views of Cohnheim—termed the embryonic hypothesis, which may be defined as the development of tumors from embryonic germinal tissues which persist in the otherwise mature organism—have received from the author a careful investigation, from which he concludes that the hypothesis cannot be maintained, since "tumors may arise in tissues that are in very different states,—embryonic, growing, mature, or retrogressive." Ziegler's opinion of the etiology of tumors is expressed as follows: "We believe that the phenomenon [formation of a tumor] is ultimately due to some change affecting individual elements of a tissue, whereby they are rendered dissimilar to their neighbors. The change is manifested especially in this, that the normal checks to the indefinite growth of the proliferous cells are inoperative or inadequate, either because the formative and productive energy is increased, or because the restraining influence of the surrounding structures is diminished, or from both causes together."

Section 7 is devoted to parasites; and we know of no English book on pathology in which this subject is so ably and thoroughly considered. To those interested in the germ-theory of disease—and at the present day who is not?—this portion of Prof. Ziegler's book will be of great assistance in continuing their studies.

In conclusion, notwithstanding we have made some exceptions to the views of Prof. Ziegler, we think his labor has been well done, and we are confident that it will meet the approbation of all those interested in this subject. Dr. MacAlister has given us an excellent translation of the work, and his additions are such as to increase very materially the value of the book. The illustrations are unusually good, and most of them are new to English readers. J. H. C. S.

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QUAIN'S ELEMENTS OF ANATOMY. Edited by ALLEN THOMSON, EDWARD ALBERT SCHAEFER, and GEORGE DANCER THANE.

There is scarcely a medical book in the English language more widely known than is Sharpey and Quain, as it is now usually called, and probably no book which has drunk so deeply at the fountain of perpetual youth, as successive generations of anatomists have arisen and passed away. In its first four editions it was the work exclusively of Dr. Jonas Quain: then it fell into the hands of Prof. Richard Quain and Dr. William Sharpey; then it was labored at by Dr. Sharpey and Prof. Ellis; then by Dr. Sharpey and Allen Thomson; then Mr. Schaefer was added to the editorial corps; and now, Dr. Sharpey being dead, the work has found its present masters. It is not necessary, and would scarcely be proper, to review a book which is so venerable with age: to pick flaws in it would be too much like quarrelling with one's grandfather. And we only say to-day that we have looked over such portions of the Anatomy as offer most chance for novelty or improvement, and are glad to find that the latest researches seem to be incorporated and the standard of the book fully maintained.

GLEANINGS FROM EXCHANGES.

BACTERIAL PATHOLOGY.—Among important observations which have been published recently regarding the relation of bacteria to disease, three—concerning syphilis, whooping-cough, and dental caries—deserve especial mention. The observations of Aufrecht, Birch-Hirschfeld, and others as to the occurrence of special organisms in syphilitic new formations, have been already mentioned, but some further investigations have lately been conducted by Dr. Morrison at Vienna, in the clinic of Professor Neumann. In fifteen patients under treatment he found bacilli constantly present in the pus collected from the surface of chancres and in papular syphilides. The organisms were present in still larger numbers in the deeper parts of excised papules and in the blood which escaped from the exposed surface. The pus was collected by means of a wire previously heated in a flame, and placed on a cover-glass which had been heated in a similar manner. The pus on the glass was then dried, warmed at the flame, immersed first in acetic acid and then in absolute alcohol. After a fresh desiccation it was treated with methyl blue or with fuchsine. At the end of half an hour the specimen was immersed in a solution of nitric acid (1 in 6). A microscopical examination then showed an immense quantity of cylindrical bacilli, readily distinguished by their intense coloration from the anatomical elements. The author does not venture to assert that these organisms are the same as those which have been described by Birch-Hirschfeld and others as the specific organism of syphilis; but he adds that he has met with other bacteria in the pus of soft chancres, longer and more delicate, very much like the bacteria of anthrax, but quite distinct from those which he has found in syphilitic productions.

In the sputa of patients suffering from whooping-cough M. Burger has found organisms which he regards as pathogenetic. They present the form of bacilli, some connected in chains, but most of them disseminated over the field, and giving the idea of micro-organisms in active process of segmentation. They differ from the Leptothrix buccalis, the rods of which are both longer and larger, and which occur chiefly about the masses of buccal epithelial cells. In order to demonstrate the supposed bacilli of whooping-cough, they must be colored by means of an aqueous solution of aniline, and then with fuchsine or methyl violet, using solutions which are not too concentrated.

From a series of researches on the part played by organisms in the causation of dental caries, M. Miller concludes that they cannot be regarded as the primal agents. Decalcification by acids generated by decomposition, etc., leaves the tissue of the tooth porous, and on it the organisms, bacilli, and cocci then develop. The bacilli can be traced into the ramification of the dental canaliculi. They have no power, however, on a tooth otherwise sound.—*Lancet.*

FERROCYANIC TEST-PELLETS AS A CLINICAL TEST FOR ALBUMEN.—Dr. F. W. Pavy, at the meeting of the Clinical Society of London, presented some pellets containing sodium ferrocyanide and citric acid. When used, these pellets are simply to be crushed and added to the urine to be tested. Albumen is at once coagulated without the use of heat. The test-pellets may be dissolved in a little water and overlaid with the urine, as in the usual mode of performing Gmelin's test, as a substitute for nitric acid.

Enough acid exists in the pellet not only for liberating the ferrocyanic acid from the ferrocyanide, but for more than neutralizing the alkalinity that is likely to belong to a specimen of urine limited to the quantity which has been recommended to be taken. Through this circumstance the test acts as well with alkaline as with acid specimens of urine.

Phosphates do not interfere with the validity of the reaction given by the test. They not only are not liable to be precipitated by it, but the acid present will promote the solution of phosphates already deposited.

Should the urine be turbid from lithates, it must be cleared by warming before the test is employed. A number of ways in which

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this can be done will readily suggest themselves without recourse to the use of a spirit-lamp, where no spirit-lamp happens to be at hand. Regarding the fallacies of this test, Dr. Pavy states,—

"With urine containing oleoresinous matter, consequent upon the administration of an oleoresin medicinally, it is known that nitric and other acids occasion a precipitate. The same will naturally occur with the ferrocyanic pellets, and this is the only fallacious indication that I am at present aware belongs to the test. Error from this cause, whenever the conditions permit it to be presented, must be guarded against in the same way as has been hitherto done under the employment of nitric acid."—*Medical Times and Gazette.*

DETECTING BACILLI IN THE BREATH OF CONSUMPTIVES.—Dr. R. Charnley Smith writes to the *British Medical Journal* (January 20) that he has had excellent results from the following method of demonstrating bacilli of tubercle of patients affected with true tubercular consumption. He describes it as follows: "I allow the patient to breathe, at frequent intervals during the day, through two thin sheets of pyroxylin, or fine cotton, one layer in front of the other, and both of which are placed in the outer compartment of an ordinary 'pepper-duster' respirator. The layer of cotton, when so arranged, will act as a double filter, the external layer removing from the ingoing air all suspended particles, such as dust, microfungi, starch, etc., which are always more or less present in it, and which it is desirable to exclude, that portion of cotton which has been next to the mouth at the same time retaining those only existing in the outgoing current, and which have been emitted from the lungs, viz., micrococci, bacilli, and some epithelial cells. It is in the latter layer only that I look for the organisms peculiar to this disease. This I do by converting the pyroxylin into gun-collodion by means of a mixture of ether and spirit. Every vestige of cotton-fibre is dissolved in the above menstruum, but other organic particles remain suspended in it. To render the bacilli manifest, my plan is to pour the thin collodion thus formed on a microscope slide, and allow the fluid to run uniformly over the surface of the glass, then immediately placing the latter on one of its edges, that only the merest film of collodion may remain on the glass; the thinner the film produced, the more successful will be the experiment. The film is to be stained. This may be done by one of the methods well known to the profession for staining tuberculous sputum, such as that of Ehrlich or Heneage Gibbes."

SUCCESSFUL REMOVAL OF A DISEASED SPLEEN.—Dr. B. Credé, of Dresden, has lately put on record a case in which he removed successfully from a bricklayer, forty-four years of age, a spleen containing cysts (*Deutsche Med. Zeitung*, No. 44). The patient had received, ten years ago, in the left hypochondriac region, a blow from a brick, which had caused him some pain for five days. A year before the operation a tumor the size of a fist was observed in the left side of the belly, which grew at first slowly, and later on more rapidly, so as at last greatly to interfere with the patient's movements. On the day of operation (September 25, 1881) the belly is described as being greatly arched; a very movable fluctuating tumor, the size of a large child's head, adherent at its upper part, and not very tender, was felt in the left side of the abdomen. As the swelling was apparently not adherent to the skin or intestines, the operator saw no reason why an exploratory laparotomy should not be performed with a view to radical operation, should the case be favorable. The diagnosis rested between cystic spleen and hydronephrosis. Laparotomy was done, the incision being made to the left of the rectus abdominis, reaching from the ribs to the anterior superior spine of the ilium. A cyst presented and was tapped, a great deal of clear yellow slightly albuminous fluid being let out. Finally, seeing that this cyst was in the spleen, it was decided to remove that organ. The wound was treated antiseptically, but not drained. Healing took place without any bad sign, and the patient slowly gained strength. The tumor weighed about a pound (without the cystic fluid). Four weeks after the operation, doughy painful swellings of all the lymphatic glands were observed, which subsided after four months. Eight days after the operation the number of white lymph-corpuscles in the blood was found to be increased. Gradually the proportion of white blood-cells to red blood-disks returned to the normal, and no difference was found at the end of four months and a half. The patient was in good health ten months after the extirpation of his spleen.—*Medical Times and Gazette.*

THE SALICYLATES AND HEMORRHAGES IN ENTERIC FEVER.—Dr. James Fergusson, of Perth, writes, "At the time when salicylic acid and its compounds are receiving so much attention, the following facts may be regarded as at least worthy of statement:

"Last year, while resident in the infirmary here, I had an opportunity of testing the efficacy of certain drugs as antipyretics in enteric fever. These agents were used successively, each over a group of cases, and included the salicylate of soda. The latter had not been long in use when an increased frequency of hemorrhages from the bowel raised the question, Could the salicylate be favoring the production of that complication of the malady? Whether it were or not, the suspicion aroused dictated the withdrawal of the

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salt from use in cases of typhoid. Shortly afterwards, I noticed that a foreign observer had reported the salicylate of bismuth, and, I think, also salicylic acid (though of the latter I cannot be certain, as I am not able now to find the report in question), to cause intestinal and nasal hemorrhages. The subject would not have been revived by me at present but for the recent experience of my successor in the resident's office of the above-mentioned institution, D. H. McLean Wilson, who joins me in placing the facts before the public. Dr. Wilson, in having recourse to the soda-salt in typhoid, found the same striking frequency of hemorrhages to follow closely. His employment of the agent differed from mine, in that he administered small doses of ten to fifteen grains frequently over the twenty-four hours, while I gave half-drachm or drachm doses at longer intervals apart. In the other respect, however, our experiences have been so similar as to warrant the facts being brought under notice, so that the important practical question involved may, if possible, be decided by the evidence of a number of observers."—*British Medical Journal.*

SYPHILITIC ORGANISMS.—Further observations of micro-organisms in syphilitic new growths have been published by Birch-Hirschfeld. He has examined a number of recently-extirpated condylomata, and also a syphilitic growth in the wall of the heart, and has come to the conclusion that the organisms are not distinct rods or bacilli, as he formerly described them, but merely micrococci, and that the appearance of rods is due to the linear association of a number of these elements. It is much more difficult to distinguish the individual elements than in the case of most micrococcal chains, because the organisms in syphilis are not round, but oval; so that they are visible not as points, but as short streaks. In most cases there are both monococci and diplococci; less frequently three or five individuals are united, which curiously simulate long rods with rounded ends. In this the observations of Aufrecht are corroborated. For the demonstration of the organisms in recent preparations, Birch-Hirschfeld prefers potash, by the clearing action of which the micrococci are visible in the tissue on account of their strong refracting power. In a broad condyloma they lie, for the most part, in small aggregations in the papillæ, and in many of the cells of the adjacent layer of the rete Malpighii. They may readily be detected in the juice of a recently-excised condyloma, by tinting in the ordinary way; and of the various tinting agents, Birch-Hirschfeld concludes that fuchsine and gentian-violet are the best. In the growths in internal organs the smallest micrococci are most abundant, and the larger forms seen in the condylomata are seldom met with. In gummatous scars they have been sought for in vain. In more recent gummatous products they were most abundant in parts which had the aspect of growing granulation-tissue. They were partly scattered, partly aggregated into groups, which never exceeded a granulation-cell in size; they were also distinctly seen within cells. Many epithelioid cells seemed to have their nuclei filled with these organisms.—*Lancet.*

TREATMENT OF NÆVI BY ELECTROLYSIS.—The cases for which electrolysis is eminently suited, according to Dr. William Newman, are superficial, dark-colored, sluggish, vascular growths, which do not possess special or abundant blood-supply. They waste away after one or two sittings as a matter of moral certainty. Next in order are those nævi which, agreeing with the above in their actual vascularity, yet have much more of surface-covering, and which do not therefore so readily, or to mere inspection, declare the conditions of their blood-supply. A majority of these cases will probably be found to be quite amenable to the electric current. On the other hand, the cases in which electrolysis will not, at least as a rule, succeed, are those which are intensely vascular, which are rapidly growing or have rapidly grown, and which, it is fair to conclude, have more or less direct communication with blood-vessels near at hand. Especially may this condition be suspected if they are near to vascular trunks, if there be local pulsation, or, again, if there be increase of temperature, a rapid filling after compression, a bright-red color with thinned integuments, all which point to the existence of very free blood-supply. Almost equally unsuitable for this special treatment are the nævi which are more solid and firm, in which, in addition to the tortuous blood-vessels, there is evidently a large amount of connective tissue. To sum up in few words, the degree of vascularity present may be taken as a very tolerable guide, and as an indication of the chances of success in submitting any nævus to electrolytic treatment.—*British Medical Journal.*

NEPHRECTOMY FOR CARCINOMA.—At a recent meeting of the Clinical Society of London, Mr. James E. Adams read notes of a case of lumbar nephrectomy for carcinoma. The patient, a male, aged 39, had intermittent hæmaturia for two years, pain in right loin, latterly profuse hemorrhage from the kidney, leading to marked anæmia; blood, pus, triple phosphates, and epithelium in urine. The disease was clearly located in the right kidney, but its exact nature was not certain. The operation was undertaken in order to explore, and, if necessary, to remove, the right kidney. By an incision parallel with the lower border of the last rib, the kidney was easily explored, and found to be the seat of a new growth, which had increased its size to about double the normal. In order to extract the organ it was necessary to enlarge the

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incision upwards. The organ was adherent to the peritoneum, and in separating it the serous cavity was opened. Owing to the size of the tumor, the ureter and vessels could not be tied separately, but were encircled *en masse* by a whipcord ligature. The peritoneal wound was closed with a catgut suture; the skin wound was freely drained. The hæmaturia ceased at once. The wound healed in a few weeks; but the patient gained no strength, suffered much throughout from cough, and was transferred back to the care of the physician, and died forty-four days after the operation, with effusion into both pleuræ, plugging of the left renal vein, and numerous secondary deposits in the lumbar glands and on the ribs.—*Lancet.*

PUERPERAL DIABETES.—A paper by Dr. Matthews Duncan was read before the Obstetrical Society of London, the author pointing out the distinction between the slight glycosuria of pregnant and suckling women and real diabetes, with its polyuria and large amounts of sugar. Physicians and surgeons were well aware of the dangers introduced into their cases by complication with diabetes. But the subject of diabetes complicating pregnancy and parturition had attracted almost no attention, and this probably arose from its rarity, which might be accounted for by the disease frequently destroying in women the sexual energies, as it is said to do in man. The author had collected twenty-two cases in fifteen women, and they demonstrated the great gravity of the complication, as respects both mother and child. Of the twenty-two pregnancies (including those ending prematurely), four had a fatal result soon after delivery. In seven of nineteen pregnancies in fourteen women, the child, after reaching a viable age, died during pregnancy. In two the child was born feeble, and died in a few hours, making an unsuccessful issue in nine of nineteen pregnancies. The histories showed that diabetes may intervene on pregnancy; that it may occur only during pregnancy, being absent at other times; that it may cease with the cessation of pregnancy; that it may come on after parturition; that it may not come on in a pregnancy occurring after its cure. They showed that pregnancy may occur in a diabetic woman; that it may be not appreciably affected in its natural progress and termination by the disease; that it is very liable to be interrupted by death of the fœtus. —*Lancet.*

POINTS IN THE TREATMENT OF URINARY ABSCESS, STRICTURE, AND EXTRAVASATION OF URINE.—Reginald Harrison advocates the treatment of abscess in the perineum, complicating tight stricture of the urethra, with or without extravasation of urine, by free incision and the introduction and retention of a short straight catheter into the bladder, retained by a T bandage. He concludes—1. That in all cases of perineal abscess and extravasation of urine, associated with organic stricture of the urethra, perineal urethrotomy behind the stricture should be practised, and provision made for the direct escape of urine by the insertion of a tube into the bladder from the wound. 2. That the treatment of the stricture should be postponed until the more urgent symptoms of abscess and retention or extravasation of urine have been relieved.—*Lancet.*

MISCELLANY.

THE bad boy who produced a sewer-gas scare by scattering Limburger cheese about the house has been rivalled by the pupils of a ladies' school in this city. An examination was coming on; several of the young ladies were not prepared for it, and accordingly they put their heads together to devise a scheme for preventing its holding. One suggested that a sewer-gas scare would be about the thing, and accordingly the fellow-conspirators scattered Limburger plentifully through the desks. The odors which resulted convinced the principal that there was something fatally wrong about the sanitary arrangements of the building, and the examination was indefinitely postponed. If the proverb be true that it is not all gold that glitters, it is equally true that it is not always sewer-gas that gives out the penetrating odor.

COPPERHEAD VENOM.—Dr. I. Ott (*Virginia Medical Monthly*, February, 1883) comes to the following conclusions:

1. The venom of the copperhead is weaker in toxic activity than that of the rattlesnake.
2. The heart, with both kinds of venom, becomes greatly prostrated, and in rapid deaths is their main cause.
3. The venom of either snake does not affect the sensory nerves.
4. The sensory centres are affected by both venoms.
5. The muscular excitability continues to be little affected at the time of death by the poison of the copperhead.
6. The two venoms greatly resemble each other in physiological activity.
7. The cardiac force, rhythm, and frequency are lowered by both venoms.
8. The arterial tension is greatly lowered by both venoms.
9. The blood, after copperhead-poisoning, shows no microscopic changes of its globules, and no difference in its spectrum.

UNUSUAL SOURCE OF FOUL AIR.—An anecdote was related by a well-known sanitarian at a public dinner last week. He had examined a building in the vicinity of New

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York, where he found that the janitor had carefully closed the valve in the cold-air pipe to the furnace, and turned the pipe into the chicken-coop. As the speaker pointed out, ignorance of the simplest details of house-construction, like this, on the part of those in command of them, is responsible for a good deal of the foul air.—*Sanitary Engineer.*

A WARNING TO DOCTORS.—A scoundrel of good address and genteel appearance has visited a number of physicians' offices in this city early in the morning for purposes of robbery. He is always in too much of a hurry to wait for the doctor, but sends up a message and leaves without an interview. Portable property is apt to disappear about the same time. He is not proud, and will take anything he can carry off. Look out for him!

THE bill introduced by Senator Adams to establish a State Board of Health and a system of registration of vital statistics for the State of Pennsylvania was defeated in the Senate Legislature on February 27. There were twenty-two votes in favor of the bill and sixteen against it, thus failing of the majority required by the Constitution. The opposing vote was cast by eleven Democrats and five Republicans.

EXPLOSIVE HYPOPHOSPHITES.—As Dr. H. Gifford, of Syracuse, was engaged recently in triturating a mixture of hypophosphite of lime, three parts, and hypophosphite of soda, one part, the compound exploded like gunpowder, the fine particles flying into his face and eyes and severely burning his eyelids and eyeballs. His injuries are likely to result in the loss of his left eye.

THE suit brought by Mrs. Georgiana Pierce, of Chicago, against her landlord and his renting-agents for damages for defects in the drainage of a house she occupied, resulted in her favor, the jury awarding her $1000. The verdict stands only against the agents.

A FEMALE CRANK.—Mlle. Bernard, the daughter of Claude Bernard, has been fined at Boulogne-sur-Seine, on complaint of her neighbors, for converting her court-yard, garden, parlor, and bedroom, into a kennel for destitute dogs. She felt that some reparation was due the canine race for the miseries inflicted on it by her father's vivisections. So says the *Louisville Medical News*,—we wonder with how much of truth.

HOMŒOPATHY IN RUSSIA.—The Medical Council of St. Petersburg have arrived at a decision, which the *Official Messenger* publishes, condemning the homœopathic remedy for diphtheria, which has lately been tried there in the hospitals of the Red Cross Society, as misleading and dangerous.

THE Brazilian government has awarded a gratuity of about £3500 to Dr. John Baptist Lacerda for his discovery of the antidotal virtues of permanganate of potassium in relation to snake-poisoning.

NOTES AND QUERIES.

PHILADELPHIA, March 7, 1883.

TO THE EDITOR OF THE MEDICAL TIMES:

DEAR SIR,—I should like to call your attention, and, through your journal, also that of others of the medical fraternity, to a new charity in our city which has been but recently in operation, and which bids fair to fill a want long felt in this community. The title of the institution is the Faith Home for Crippled Children, and its site is upon the northeast corner of Forty-Fifth Street and Osage Avenue, West Philadelphia. Mrs. Robert F. Innes, of No. 226 South Thirty-Ninth Street, established the home, beginning about the 1st of October, 1882, with one crippled child, for whom she had in vain sought residence among all of our well-known charities. The home now shelters ten poor crippled children, and there is no admission-fee; in fact, the home is entirely free, and is solely dependent upon "faith and work" for its successful existence.

Dr. James H. Lloyd, of No. 200 South Fortieth Street, is its visiting physician, and numerous people in this section of the city have given liberally. The home is under the immediate supervision of a member of an Episcopal sisterhood.

They need everything, and deserve all that our truly charitable citizens are able to donate.

Yours truly,

HENRY M. WETHERILL, JR.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY FROM MARCH 3 TO MARCH 17, 1883.

BROWN, HARVEY E., MAJOR AND SURGEON.—To be temporarily assigned to duty at Mount Vernon Barracks, Alabama, during the absence, on leave, of Captain T. A. Cuningham, Assistant-Surgeon. Paragraph 2, S. O. 17, Department of the South, March 6, 1883.

WILLIAMS, J. W., MAJOR AND SURGEON.—Upon being relieved from duty at Fort Cœur d'Alène, Idaho, will proceed to Fort Walla Walla, W.T., and report for duty as medical officer of that post. Paragraph 5, S. O. 24, Department of the Columbia, March 1, 1883.

CALDWELL, O. G., CAPTAIN AND ASSISTANT-SURGEON.—To be relieved from duty at Fort Fred. Steele, Wyoming, and will report in person to the commanding officer, Fort Laramie, Wyoming, for assignment to duty at that post. S. O. 23, Department of the Platte, February 27, 1883.

CUNINGHAM, T. A., CAPTAIN AND SURGEON.—Granted leave of absence for twenty days, to take effect from the 21st instant. Paragraph 1, S. O. 17, Department of the South, March 6, 1883.

HEIZMANN, CHARLES L., CAPTAIN AND SURGEON.—To be relieved from duty in the Department of the South, and assigned to duty at Columbus Barracks, Ohio. Paragraph 8, S. O. 58, A. G. O., March 12, 1883.

PAULDING, H. O., CAPTAIN AND ASSISTANT-SURGEON.—The leave of absence granted in S. O. 11, Department of the Platte, January 27, 1883, is extended twenty days. S. O. 23, Military Division of the Missouri, March 2, 1883.

TAYLOR, B. D., CAPTAIN AND ASSISTANT-SURGEON.—To be relieved from duty at Fort Ringgold, Texas, and will, so soon as able, report to the commanding officer, Fort Clarke, Texas, for duty. Paragraph 6, S. O. 25, Department of Texas, March 9, 1883.

WOOD, MARSHALL, CAPTAIN AND SURGEON.—Is assigned to duty at Fort Cœur d'Alène, Idaho. Paragraph 5, S. O. 24, Department of the Columbia, March 1, 1883.

HOPKINS, WILLIAM E., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—The leave of absence granted December 28, 1882, is extended two months. Paragraph 5, S. O. 56, A. G. O., March 9, 1883.

BRECHEMIN, LOUIS, FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—To proceed to Fort Brady, Michigan, and report to the commanding officer for duty at that post. Paragraph 1, S. O. 41, Department of the South, March 14, 1883.

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PHILADELPHIA, APRIL 7, 1883.

ORIGINAL LECTURES.

CLINICAL LECTURE

ON A CASE OF DIABETES MELLITUS ASSOCIATED WITH DROPSY AS A SYMPTOM OF LOWERED VASO-MOTOR TONUS.

Delivered March 14, 1883, at the Philadelphia Hospital,

BY EDWARD T. BRUEN, M.D.,

Demonstrator of Clinical Medicine, University of Pennsylvania.

GENTLEMEN,—The case to which your attention is invited this morning is that of a young man, 32 years of age, five feet nine inches in height, weighing one hundred and forty-seven pounds. His complexion is florid, and examination of the tongue and mucous membranes shows that there is no anæmia. His personal history states that his only illnesses have been an attack of dropsy after scarlet fever at the age of 14 years, and of pneumonia five years ago. His family history is free from scrofula, phthisis, or malignant disease. When admitted into the hospital on March 2, his chief complaint was of wandering pains of a vague character; but on the 7th of March, when I made my visit, he complained of swelling of the genitals. This became general anasarca by the 8th instant, with moderate bilateral pleural effusions and ascites. His urine was then examined by appropriate tests, and found to contain a large amount of sugar. Two questions at once present themselves for solution: the first, Is the diabetes temporary, or has it existed for some time? The second, What is the cause of the dropsy?

I need not remind you, in investigating the first proposition, that temporary diabetes can occur from a variety of causes; for instance, the ingestion of particular articles of food or medicines, such as ether or nitrite of amyl; the influence of violent emotions or moral impressions in the hysterical or epileptic; injuries affecting the central nervous system, such as falls or blows upon the cranium, or fracture of the vertebræ or skull. These forms of glycosuria are generally transient, but yet may persist for some time. Puerperal diabetes has been recently made the subject of a careful paper by Dr. Mathews Duncan, read before the Obstetrical Society of London, in which the distinction between the slight glycosuria of pregnant and suckling women and real diabetes, with its polyuria and large amounts of sugar, is perspicuously stated. These remarks place before you the reason for the first query. Let us investigate the clinical evidence. Since about the age of 25 years this patient has suffered from polyuria; he has usually urinated about every two hours. Augmented urinary secretion is one of the cardinal symptoms of saccharine diabetes. The other leading symptom is excessive thirst; but no evidence occurs in this patient's history that such a symptom has existed. There is, however, a great dryness of the skin, with tendency to itching, which has been annoying at times. The most distinct support to the diagnosis of persistent glycosuria is the enlargement of the liver. It measures nearly five inches in the nipple-line and seven inches in the axillæ, and is correspondingly enlarged posteriorly. This enlargement of the liver has not been attended with any of the symptoms of intestinal indigestion, portal obstruction, or perverted hepatic action, save in the latter instance, in the matter of the diabetes. Enlargement of the liver is well recognized as an accompaniment of this disease, and it is reasonable to regard the clinical fact upon the affirmative side of our proposition. Combining these facts, after reviewing the previously-stated family history, and in the absence of any probable cause of intermittent or periodic diabetes, we close this question by deciding that the diabetes has been in existence for some time.

The point of special interest to me in this case lies in the study of the dropsy and its origin. Most naturally we recall that although renal disease in one of the forms of Bright's disease is rare in diabetes, yet in advanced cases fatty degeneration of the parenchyma of the kidney, with the presence of albumen and possibly casts, is well appreciated. The most careful repeated study of this urine, however, establishes its normal character. There is an absence of associated arterial and cardiac changes, as well as those general modifications of nutrition so positively intertwined with organic renal disease. Turning to the heart, we find that it is normal in structure

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and its valves healthy. Having found the liver enlarged, our first impulse suggests this organ as a possible factor in the dropsy. Dropsy of hepatic origin means portal obstruction. Serious portal obstruction implies repletion of the mesenteric and splenic venous circulation, with associated dyspepsia, hemorrhoids, or splenic enlargement. None of these conditions are even suggested by our present examination of this case or a review of the past history. Moreover, the advent of the dropsy was sudden; and this at once militates against hepatic or renal diseases.

I beg you to notice once more that there is no evidence of anæmia. The blood-corpuscles, it is true, have not been counted, yet the local congestions of anæmia cannot in this case deceive us.

The cause of the dropsy, I believe, is to be ascribed to lowered vaso-motor tonus. Bear with me for a moment if I recount some of the experimentation which the physiological laboratory has to offer on this subject, and which I have already cited in connection with a few somewhat similar cases in this lecture-room.

The first experiments upon the subject of œdema were made by Lower, in 1680. He tied the venæ cavæ, and found that œdema appeared in the lower extremities, and he ascribed the œdema to the diminished absorption of the intercellular fluid owing to venous congestion.

Valsalva and others repeated these experiments, but without a similar result. As usual, in the middle ground the truth was found.

Ranvier has proved that œdema depends not only on diminished absorption, but also upon increased exudation from the vessels. He first tied the venæ cavæ in the abdomen of a dog, and found, like Valsalva, that œdema did not appear; there was undoubtedly overfilling of the arteries, but the lymphatics were able to absorb the exudation without any assistance from the veins, and therefore no accumulation of fluid took place. He also found that upon cutting the sciatic nerve on the wounded side, intense œdema occurred.

Venous congestion was undoubtedly present in both legs, as the venæ cavæ had been tied, but in one the nervous influence proceeding to the arteries through the sciatic kept them contracted and prevented the exudation of more fluid than the lymphatics could absorb. In the leg in which the nerve had been paralyzed by division of the nerve, the vessels dilated, the limb became rosy and warm, and so much fluid was poured out that the lymphatics alone could not absorb it without the aid of the veins. Ranvier further proved that this was due to the paralysis not of motor, but of vaso-motor nerve-fibres, which are contained in the sciatic; because, after cutting, in different animals, motor and vaso-motor nerves in the lumbar region before they had united to form the nerve-trunk, when the motor fibres were divided as they issue from the lumbar vertebræ before uniting with the sympathetic fibres, complete paralysis of the legs was produced, and no œdema occurred. But if, on the other hand, he divided the sympathetic fibres passing to the sacral plexus, there was no motor paralysis, but the vessels dilated and œdema occurred. The experiments first cited show us that paralysis of the vaso-motor nerves is an important factor in the production of anasarca; but this is not, I think, the only factor involved.

Broadly speaking, the waste products of the animal economy are urea, carbonic acid, salts, and water. The carbonic acid and the water pass off by the lungs; the urea, salts, and water by the kidney; but by the skin also small portions of the above substances are eliminated. If the function of the skin is suspended, these substances accumulate in the system, and can, I think, aid in the production of dropsy. Again, the function of the skin is not alone dependent upon the blood-supply of the skin, but is also under the control of the innervation of the nerves supplying the cutaneous glands.

Dr. Foster states that the skin of dogs and cats can be made to act, and sweating produced, by stimulation of the sciatic nerve after clamping the aorta; and the same result he has obtained in the leg of a frog by stimulating the sciatic nerve after amputating the leg.

The existence of secretory nerves and their special influence over the secretions of the skin have also been investigated by Drs. Isaac Ott and G. B. Wood Field, of the University of Pennsylvania, in a series of original experiments. Their experiments are confirmatory, and may be found in the *Journal of Physiology* for 1878–79,

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entitled "Sweat-Centres: the Effect of Muscarin and Atropin on them."

Now, I need not go over the grounds which have been stated in all the text-books to show that altered vaso-motor tonus is an essential element of diabetes and is objectively evident in the dry skin of diabetics. A sudden exposure to cold may overweight the remaining vaso-motor tonus, reduce cardiac power, and permit the accumulation of a general dropsy. Now, an examination of the urine secreted by the patient shows that the urine passed fell from one hundred and twenty ounces to sixteen ounces when the dropsy appeared. Under treatment it rose within a week to one hundred and forty ounces; but the diminution is most significant.

I have dwelt upon this explanation of the dropsy because I would similarly explain those cases of general anasarca which sometimes complicate malarial attacks when no lesion of the heart, kidneys, liver, or blood can be diagnosticated. And in diabetes mellitus dropsy is most commonly a symptom of the latter stage of the malady, and of similar etiology with the dropsy of the latter stages of phthisis.

In conclusion, let me indicate the proper line of treatment. The dyspnœa—for our patient has not been able to lie down for several nights—demands the prompt use of diuretics.

℞ Potass. citratis, ℥j;
Inf. scoparius, Oj. M.,

to be used in the twenty-four hours, was ordered, and has been taken for several days; also,

℞ Tinct. digitalis, gtt. c;
Ammoniæ carb., gr. lxxx;
Mucil. acaciæ, f℥iss;
Ol. gaultheriæ, gtt. xii;
Aquæ, q. s. f℥iv. M.

Sig.—Two teaspoonfuls four times daily.

To-day the patient, as you see, can lie down, and is in every way much improved. As soon as the pleural effusions and ascites have been removed, a treatment directed to improve the vaso-motor tonus will be carried out.

Absorption of fluid from the tissues is, like its exudation into them, greatly controlled by the central nervous system. Experiments by Göltz and Nasse have demonstrated that when the fluid was injected under the skin at the back of a frog, it was rapidly absorbed so long as the brain or spinal cord was uninjured, but when these were destroyed little or no absorption took place.

Physiologically speaking, absorption is under the influence of nerve-centres, therefore stimulants of these centres will increase their physiological functions. Stimulation of a sensory nerve is capable of inducing contraction of the vaso-motor system. Apropos of this, Nasse has found that irritation of a sensory nerve can occasion increased absorption. In our materia medica the various preparations of strychnine and zinc as stimulants to the central and vaso-motor nervous systems are most valuable drugs for the treatment of cases similar to this one, when the dropsy or anasarca is moderate. Iron will also enable the red blood-corpuscles to perform their function as carriers of oxygen to the tissues, and thus the materials accumulated in the lymphatics and veins is first oxidized, and then is eliminated from the system. This is quite apart from the properties of iron as a local stimulant to vaso-motor nerves.

Frictions applied to the skin form an important part of the treatment of diabetes, and may be a beneficial part of the treatment of this patient. Naturally, however, the subsequent treatment of this case will be modified by the line of treatment adopted to control, as far as possible, his serious primary disease.

In conclusion, permit me to offer a few words as to the prognosis of diabetes. The age of the individual and the state of the general health at the time the disease develops must be weighed. But an erroneous impression seems to prevail as to the duration of diabetes. This duration is most variable, but certainly many cases progress and terminate after the lapse of a decade.

March 28.—At this date the patient is entirely free from dropsy; the amount of the urinary secretion is sixty ounces daily, and the appearance of general health is restored. The patient expects soon to return to his occupation as a farmer.

ÆTHUSA CYNAPIUM.—Tanret has been unable to find in the lesser hemlock, or fool's parsley, any poisonous principle whatever, either alkaloid or glucoside. Physiological experiment also gave negative results. This confirms Harley's views published in St. Thomas's Hospital Reports for 1873. Cases of supposed poisoning by it, therefore, must have been due to true hemlock, or some similar plant.—*Journal de Pharmacie*, October, 1882.

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ORIGINAL COMMUNICATIONS.

REMARKS ON THE USE OF THE OBSTETRIC FORCEPS.

Read before the Philadelphia County Medical Society, February 28, 1883,

BY ELLIOTT RICHARDSON, M.D.,
Lecturer on Clinical and Operative Obstetrics at the University of Pennsylvania.

CONSIDERABLE courage is required to bring forward for discussion at this time so trite a subject as the obstetric forceps; but, considering the wide-spread use of this instrument, its capacity for evil in the hands of the unskilled or the unwise, the diversity of views respecting the forceps existing at all times, and the changes which the prevailing sentiment regarding it has undergone at different periods, I believe the discussion of the subject to be always in order and always likely to be attended with good.

Certain facts in the history of the forceps have struck me forcibly in reading, at different times, the literature upon the subject in our own language, and which, I believe, should not be without their weight with us at the present day. Conservatism is not always wisdom, nor, on the other hand, is all progress improvement. Those who are familiar with the history of the obstetric forceps from the time of their general introduction among the profession in England to the present day know that, when first brought into public notice, it was eagerly seized upon by the profession, and was at once recognized as a most important artificial aid in labor. Among the most prominent advocates for the use of the forceps, of whom we have knowledge, in the early time, were William Gifford and Edward Chapman, followed twenty years later by Smellie. Smellie was a bold and skilful user of the forceps, advocating its free application, and was probably fully abreast, in his own practice, with the most fearless advocates of the use of this instrument in the present time. There is no doubt that the forceps for the first twenty years of its popularity in England was most recklessly used; so that at the beginning of the last half of the eighteenth century much prejudice against this instrument became manifest.

The admirable work of Smellie, both literary and practical, did not check the tide of reaction against the forceps, and it may with truth be said that for a whole century, beginning with the middle of the eighteenth and terminating with the middle of this, nearly all English obstetric teachers and writers of note advised either a most limited use of the forceps or its total abandonment as an obstetric instrument. Indeed, Smellie himself, though the warmest advocate in England of its use during the middle period of the last century, was fully aware of the dangers incident to it in the hands of the imprudent, and so cautious was he in his advice to the inexperienced that he refrained for many years from recommending, or even showing, his long forceps to his class. "In order," he says, "to disable young practitioners from running such risks, and to free myself from the temptation to use too much force, I have always recommended the forceps so short in the handles that they cannot be used with such violence as will endanger the woman's life." And again he says, "But if these expedients be used prematurely, when the nature of the case does not absolutely require such assistance, the mischief that will ensue will often overbalance the service for which they are intended." In after-years he wrote, "I did not then recommend the use of them [the long forceps], because I was afraid of encouraging young practitioners to exert too great force and give their assistance too soon."

At the time Smellie wrote, the forceps had been known to the profession at large in England for twenty years, and, as we have seen, this lapse of time had been sufficient for him to recognize not only the utility of the instrument, but also some, at least, of the dangers of its indiscriminate use. Smellie's views advocating an extended use of the forceps did not pass unchallenged during his lifetime. Indeed, he was vigorously attacked by other writers of his day; but perhaps the most violent opposition appeared in an anonymous publication in 1772, in which the writer says, "This instrument [the forceps] was for some time in the possession of a few practitioners only, nor has it been publicly known above forty years. But as soon as it was made public, it is surprising with what avidity it was adopted, in so much that for the first twenty years the whole study of the men midwives was how to new model and improve its form and make, to delineate the various methods of using it, and to demonstrate in what a variety of

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situations and positions of the child it might be serviceable, till they, by degrees, found out that there could hardly occur a case of midwifery but where the forceps might be used with advantage. . . . I can hardly, therefore, fancy myself exceedingly presumptuous if I declare the forceps to be quite as useless to women in labor as either the blunt hook or fillet. But I must beg leave to go still a little further upon this head, and observe that this is not only a useless but also a very pernicious instrument; for by hastening delivery before the parts are properly distended by the natural pains and strainings of the mother, such dreadful lacerations are made, both internally and externally, as must frequently prove fatal, or, at least, the source of much inconvenience and misery to the unfortunate woman who has been the subject of such practices. . . . Nor am I by any means singular in my opinion of the inutility of this instrument. The best practitioners in midwifery have given it up, and very seldom have recourse to it; and I am credibly informed that the man who has, for many years, been deservedly esteemed the practitioner of greatest skill and judgment of any who profess the obstetric art in this kingdom" (Dr. William Hunter, evidently) "declares that he has seldom or never, during the whole course of his practice, used the forceps, or met with a case where he thought it necessary to do so; unless he may be said to use them when he occasionally introduces a single blade to remove any impediment which the head of the child may accidentally meet with by pressing upon some of the bones of the pelvis, whereby its descent and delivery are retarded; but he adds that occasions for this very seldom happen; he could almost always get the better of such obstacles with the hand only." Although an anonymous publication is not usually deserving of much consideration, yet this one is of value, inasmuch as it reflects pretty accurately, in so far as we are able to judge, the prevailing opinion of the time among the most prominent obstetricians in England. William Hunter's practice is probably not accurately described by the writer, but Hunter himself declared that, upon the whole, the forceps had "done more harm than good." For nearly a century almost all writers of note in the English language held views but little in advance of those last quoted. William Hunter, Denman, Osborne, Blundell (who was first to propose the so-called Porro modification of Cæsarean section), Robert Lee, and, in America, Meigs, were all advocates of conservatism in the use of the forceps. What similar array of eminent names can be collected among obstetric writers in any age! These were the men from whom most practitioners past middle life at the present day among English-speaking people all over the world have drawn their theoretical knowledge of obstetrics. Denman says, "It is scarcely possible to say too much against a hasty recourse to the forceps, even in cases which may ultimately be relieved by using them, and neither this nor any other instrument is now used in the practice of midwifery one-twentieth part as frequently as they were fifty years ago. . . . The use of instruments of any kind ought not to be allowed in the practice of midwifery from any motives of eligibility. Whoever will give himself time to consider the possible mistakes and want of skill in younger practitioners, which I fear many of us may recollect, the instances of presumption in those who, by experience, have acquired dexterity, and the accidents which under certain circumstances seem scarcely to be avoided, will be strongly impressed with the propriety of this rule, as well as from the general reason of the thing." Again he says, "If we compare the general good done with instruments, however cautiously used, with the evils arising from their unnecessary and improper use, we might doubt whether it would not have been happy for the world if no instrument of any kind had ever been contrived for, or recommended in, the practice of midwifery." And he adds as a rule for the application of the forceps, "a practical rule has been formed that the head of a child shall have rested for six hours as low as the perineum, that is, in a situation which would allow of their application before the forceps are applied, though the pains should have altogether ceased during that time." Dr. Robert Lee approves of this rule as being well calculated to prevent "the rash and unwarrantable use of the forceps," but says that in some cases of rapid exhaustion, or of sudden accident, "it would be wrong to comply with it." Osborne says, "In the state indicating the use of the forceps, all the powers of life are exhausted, all capacity for further exertion is at an end, and the

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mind is as much exhausted as the body." Blundell writes, "If you must err, then take my advice and err rather by the neglect and rejection of instruments than by their too frequent use; for the cases in which you may use instruments without need are as numerous as the cases that fall under your care, with the exception of the few, very few, in which these weapons are really required." Among the rules laid down by Denman were that "the use of the forceps can never come into contemplation unless the os uteri is fully dilated," and that "no case is to be esteemed eligible for the use of the forceps until the ear of the child can be distinctly felt." Dr. Robert Lee insists upon the observance of the latter rule, and says, "I have never met with a case in which the forceps was satisfactorily applied before the os uteri was fully dilated and the head had descended so low that an ear could be felt." Professor Charles D. Meigs wrote, "The forceps cannot be applied unless the parts are favorably disposed; for instance, the os uteri must be dilated and gone up over the head. The vagina and perineum, also, must be in such a condition that we need have no fear of lacerating any of their parts, else the operation is contra-indicated. A man shall hardly be justified who inserts his forceps within the os uteri. He must wait until the circle has risen above the parietal protuberance and can no more be felt." Dr. Meigs considered that the idea that the forceps is, in its design, a compressive instrument was "one of the most dangerous errors relative to the forceps."

I cannot better summarize the views of those whom I have above quoted than to extract from a paper by Dr. W. Tyler Smith (Trans. Lond. Obst. Soc., 1860) the following: "Thus, we have in our day eminent authorities declaring in favor of the following conditions in regard to the use of the forceps:

"1st. That, in ordinary cases, the head must have rested for some hours on the perineum before the instrument is used.

"2d. That the forceps ought not to be employed unless an ear of the child can be felt.

"3d. That the forceps must never be introduced until the os uteri is completely dilated.

"4th. That it is gross malpraxis to introduce the blades of the forceps into the uterus.

"5th. That the forceps should not be used as a compressor."

Notwithstanding the restrictions thrown around the use of the forceps by most of our obstetric teachers for nearly a century, it is doubtful if their rules were implicitly followed by even a majority of enlightened obstetric practitioners at any time during this period. As the history of the experiences of those engaged in extensive private obstetric practice, who were not writers, comes gradually to light, we find, particularly in the United States, that a much greater freedom in the use of this instrument has been indulged in than the above rules permit of. On the continent of Europe the forceps has always been more freely used than in England, and the influence of French obstetric teachings has always been felt to a certain extent in England and in our own country. It has, however, only been within the past twenty-five years that English writers of note have, to any extent, been bold enough to oppose the teachings of the eminent men whom I have so extensively quoted. It is not too much to say that now the reaction has fairly set in, and that no writer in the present day would have the temerity to advance in public the views so strenuously insisted upon by William Hunter, Denman, and others in their times and long afterwards. We now feel that we have good authority for violating every one of the five rules above given: that the forceps may be applied to the fœtal head at any portion of the parturient canal; that they may be applied to the fœtal head within the cavity of the uterus; that they may be so applied when the os uteri is only sufficiently dilated to admit of the introduction of the blades; that when thus introduced they may be used as dilators of the os uteri; that not only may the forceps be used as compressors, but that such use is often a valuable aid to the delivery of the woman with safety not only to her but to the child. The latter view was long taught by the late Prof. Hodge. All these things are not only done repeatedly in the present day, but the claim is made that with such free use of the forceps life is not sacrificed, but saved,—that the health of the woman is not impaired, but conserved. Let us inquire into the subject, and learn, if we can, whether we are right or wrong in holding to the modern view: whether we should follow the great men of

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the past because they were wise in other things; or whether we can prove by the results of a more extended use of the forceps that they environed the use of this instrument with unnecessary restrictions, —that their caution was not wise. Unfortunately for us, the statistics which are available furnish us only with the immediate results as affecting the life or death of the woman and child. They also treat only of cases occurring under the care of men of acknowledged ability far superior to the average practitioner. Such as they are, they seem to justify the wisdom of a frequent resort to the forceps. It is unnecessary to give here those oft-quoted statistics of Clarke, Collins, Johnston, Siebold, and others, which can be found in almost any text-book on obstetrics. It is sufficient to say that they show an almost exact inverse ratio between the frequency of forceps applications and maternal deaths. These principally refer to hospital practice. When we come to examine the statistics of private practice, we find much greater discrepancy in the relative proportions of forceps cases and deaths. Thus, Dr. Robert Dunn ("Statistics of Midwifery in Private Practice, embracing Twenty Years," Trans. Lond. Obst. Soc., 1860) reports, out of four thousand and forty-nine cases, twenty forceps, or one in two hundred and two, and twenty-seven maternal deaths from all causes, six of which were from remote diseases, leaving twenty-one deaths, or one in one hundred and ninety-three. Dr. Knoggs ("Statistics of Midwifery in Australia," *Dublin Med. Jour.*, June, 1882) reports on fourteen hundred and thirty cases attended by himself and assistants, of which forceps cases bore the proportion of one in nine. Maternal deaths from all causes, one in one hundred and two. The late Dr. William Harris, of this city, used forceps once in every seven cases, with no deaths. In my own practice I have applied forceps about once in ten cases, with no maternal deaths. These are given only as specimens of reports of private practice; more could be added were it necessary, but these, I think, will suffice to show that the forceps can be used with great frequency and with little immediate mortality to the mother. It must be admitted that, so far as death of the woman while in labor or during the puerperal period is concerned, all statistics show, unquestionably, that frequent resort to the forceps has been attended with the most favorable results. The inference that such use of the instrument is, on the whole, beneficial is open to two sources of fallacy. One is the fact, before mentioned, that all hospital reports, and most, if not all, reports of private practice, represent the experience of men of ability far above the average. The other source of fallacy is that we have no accurate statistics of the remote ills ensuing from the use of forceps. In regard to the first point, it may be said that it is impossible to ascertain the truth; we can only surmise. The large majority of labor cases which fall at all under the care of physicians are attended by men of average ability, the results of whose cases are known, as a whole, to themselves only. We can, therefore, judge only by what we see, or by what accidentally comes to our knowledge. In such cases, when death ensues after an instrumental delivery, we know not how much to ascribe to the forceps and how much to other things. This much only can be said, that the favorable results from the use of forceps by the exceptionally wise and skilful should not be accepted as a criterion of similar cases in the hands of the profession at large. No one was better aware of this than Smellie, who, having perfected, as he believed, a most valuable instrument, refrained from announcing his discovery to his class or showing them the long forceps, for fear that they, through reckless use of it, might not only inflict an evil on society but bring his invention into disrepute.

I now come to speak of the remote results of the use of the forceps, to which I have already alluded as constituting the second source of fallacy to the inferences likely to be drawn from the published statistics. We have no accurate information affecting this matter, for the following reasons. Many women are attended by the same accoucheur in one labor only. This is eminently true in hospital practice, but is also the case, to some extent, in private practice. In these cases but little opportunity is afforded to learn the after-history. Again, the injuries inflicted often do not become apparent for years afterwards; and even when the woman has been attended in successive labors by the same physician the results of his treatment in many cases cannot with certainty be fully ascertained until late in her sexual life. Years, therefore, are necessary to teach us, if we learn

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from our own experience only, the best methods of practice. Again, when the remote results in all their details are known, few men have the courage, or care, to undertake late in life the thankless task of reporting all the mischief they have unwittingly done. This we know, however, that men become more and more patient with nature and less anxious to interfere with her laws by hasty use of the forceps as they approach the close of a long obstetric career. Our only means of judging of the amount of injury done by this instrument, aside from observation in our own cases, is what we see of other men's obstetric practice in our gynæcological cases. What are the remote ills liable to result from the use of forceps? They are those depending upon bruises, lacerations, and excessive or rapid dilatations occurring during labor. It is true, these injuries may occur under any circumstances; but nature in her wisdom regulates the expulsive forces in strength and character so as best to protect the maternal tissues from injury: when, therefore, we seek to hasten the process of labor unwisely, we always endanger their integrity. Bruising of the pelvic structures may result in inflammation of the uterus, ovaries, bladder, urethra, the peritoneum, or the pelvic connective tissue, with their attendant annoying symptoms, which I need not enumerate, as they are familiar to all of us. Lacerations may lead to the same, but in addition, if not promptly repaired, they, by weakening the uterine supports, may result in various displacements of the uterus and other pelvic organs. The formation of obstructive cicatrices on the one hand, and of vesico-vaginal and recto-vaginal fistulæ on the other, are occasional results of the same class of injuries. Excessive or violent dilatations of the parturient canal, unattended by palpable lacerations, I believe, are largely responsible for prolapsus and other displacements of the uterus. A brief review of the anatomy of the pelvic organs of generation in woman will show us that the uterine supports are numerous. I will not refer to those which tend especially to keep the fundus in its normal position, inasmuch as we are chiefly concerned, in the present inquiry, with those whose principal office it is to maintain the uterus at its proper level in the pelvic cavity. A section from before backwards, through the median line of the pelvis, shows us the uterus supported upon a column which commences below with the strong muscular and fibrous structure constituting the floor of the pelvis. Rising from the latter in the line of the pelvic axis is the recto-vaginal septum, composed of connective tissue; in front and above this lies the posterior wall of the vagina in close contact with the anterior wall of the same passage, which extend together to the lower extremity of the uterus. The two walls of the vagina are kept in contact by the pressure of the abdominal walls and contents acting upon the bladder in front and the intestines behind, the latter consisting of the rectum and a loop of small intestine pressed down into the cul-de-sac of Douglas. Thus the generative organs stretch from side to side of the pelvis throughout its whole extent, from the superior to the inferior strait, like an open valve, and receive the pressure of the abdominal contents in an equal degree on their anterior and posterior surfaces, the *point d'appui* being the strong muscular and fibrous structure constituting the floor of the pelvis. Lacerations, therefore, extending into the floor of the pelvis, through the perineum, we can easily see, seriously weaken if they do not wholly destroy the supporting column upon which the uterus is placed. Excessive dilatation of the vagina and vulva, with laceration of the posterior vaginal wall, or even, in all probability, without any laceration, seriously weakens this support, even though the perineum remain intact. Unless these injuries are repaired either by the efforts of nature or the physician, a certain amount of prolapsus of the uterus will occur soon after the woman assumes the erect position, but this displacement will not immediately become considerable, on account of other supports with which the uterus is supplied. Savage found that in the cadaver, when all the supports of the uterus from below were divided, he could, by means of a pair of volsella forceps inserted into the cervix uteri, draw the entire organ down to only a limited extent. On looking for the structures which resisted the farther descent of the uterus, he found them to consist of the strong fibrous bands constituting the utero-sacral ligaments. These ligaments have their origin on the anterior surface of the sacrum, chiefly at its upper part, and run forward on either side of the rectum and the cul-de-sac of Douglas to the uterus, to which organ they are attached at the point

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of junction of the cervix with the body; prolongations are continued forward to the bladder and pubic bones. When these were divided, the uterus could be drawn down one inch farther; the broad ligaments with their enclosed connective tissue had to be divided before complete procidentia of the uterus could be artificially produced.

Savage thus demonstrated that injury to the utero-sacral ligaments is an essential factor in the production of marked prolapsus of the uterus, though this may be accomplished by the prolonged traction of an abnormally heavy uterus deprived of support from below. Now, these ligaments may be injured either by laceration extending through the cervix uteri, or, without such injury to the cervix, they may, by forcible dilatation of the neck of the uterus, be themselves torn and distended in a similar manner to the ligaments of a sprained joint. All lacerations of the parturient canal extending into the mucous surfaces can be at once detected after delivery and repaired at any time the attending physician may select. Injuries to the utero-sacral ligaments when entirely submucous cannot be discovered for months, perhaps not for years, and, furthermore, are never amenable to operative treatment. They are, in fact, incurable, and can only be palliated. Prolapsus of the uterus and other displacements of that organ, with all their annoying symptoms, are liable to ensue after a time upon this injury. The special symptoms resulting from laceration of the cervix uteri alone in certain cases I need do no more than refer to, as they have been the theme of much discussion among gynæcologists within the past few years. If we are to give full credit to Emmet and his followers, they give rise to some of the most serious general and local diseases, predispose the sufferer to the development of epithelioma of the cervix, and produce the most painful and distressing nervous ailments.

I do not think I have overdrawn the picture of the injuries which the forceps is capable of producing. I do not mean to say that these are, by any means, exclusively due to the use of this instrument, but I do mean to say that a certain proportion of such injuries to the parts below the uterus, and by far the largest proportion of those to the cervix and utero-sacral ligaments, are due to the use of the forceps: the latter class can ensue from the use of this instrument only when it is applied through the partly-dilated os uteri. Notwithstanding the foregoing remarks, I wish it to be clearly understood that I approve of the application of the forceps at any portion of the parturient canal. I have repeatedly applied it through the imperfectly dilated os, and will so apply it again when circumstances seem to require it; but I consider the use of the instrument to be *never* without some degree of danger to the well-being of the woman, and that therefore it should never be used as a means of saving time unless we think we see that delay is likely to compromise the life or health of the mother or child. The danger becomes greater with the height at which the instrument is applied, not so much from the introduction of it as from the use we are tempted to make of the enormous power which this instrument places in our hands. The danger rather increases than otherwise as we acquire dexterity in introducing the forceps; for then we are not deterred by fear of inability to apply them.

What are we to learn from the extreme caution of Hunter, of Denman, of Osborne, of Blundell, of our own Meigs, of Lee? What are we to think of the illustrious Smellie, the father of modern operative obstetrics, hiding his newly-discovered light under a bushel, not to be seen of men less prudent than himself? We are to learn and to think that these men knew the obstetric forceps essentially as we know them, and that they knew—none better than Smellie—the evil of which the forceps was capable in the hands of the ignorant or reckless accoucheur. These men knew the value of time in obstetrics,—time for the dilatation of the maternal parts and for the moulding of the head. I have, in the past, used the forceps freely,—more, I now admit, than was requisite, notwithstanding I have been singularly fortunate in the results of my cases; but when I came to have more confidence in my ability to judge of the condition of the mother and child, of just how much the former would bear without failure of strength, and how much the latter could endure without danger of asphyxiation, I was astonished to see difficulties disappear before the natural efforts of the mother which at first seemed imperatively to require instrumental interference. If one will only keep from irritating the mother's tissues by frequent examinations, and will, at the same

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time, soothe her mind by the exhibition of that calmness and confidence which are so contagious, instead of displaying anxiety in his countenance and worrying his patient by constant investigations, he will often see a wakeful, nervous woman become calm and disposed to sleep, an irritable uterus become less painful, a rigid os become relaxed, and pains which are inefficient, and exhausting to the woman and threaten the child with asphyxia, become rhythmical, efficient, bearable to the woman, and safe to the child.

The beneficial effects of quietness of mind and freedom from apprehension on the progress of labor are beautifully exemplified in those cases, more or less familiar to us all, of very early rupture of the membranes. The mother is prone to take alarm at the event; as a consequence of this alarm, the uterus is soon thrown into frequent, painful, and inefficient contractions. From the almost constant pressure of the presenting part upon the os uteri, this too becomes irritable and rigid. While she is in this state, let the wise physician enter with reassuring looks and conduct, calm his patient's mind with these, and allay her pain with an occasional dose of opium, and the scene changes: rest and quiet of mind and body soon lead to happy results.

My object in writing this paper is to call attention, in this age of most free, if not reckless, use of the forceps, to what we are doing in all its bearings; to compare ourselves with those who were at least our equals in the past, and to ask whether they were all wrong and we altogether in the right. To repeat what I have already said, while conservatism is not always wise, neither is all progress improvement. While I would not hedge the forceps round with rules which would often restrict its proper use, I submit that teachers in the present day err in not impressing upon the minds of their auditors, with sufficient emphasis, the dangers attendant upon the imprudent use of the forceps, particularly when it is applied within the uterus, and in not calling their attention more closely to the value of time and of the slow, rhythmical succession of the expulsive efforts, whether made by the mother herself or imitated by the physician with his forceps, in so moulding the fœtal head and dilating the maternal parts as to preserve the integrity of the tissues of both, without interfering dangerously with the uterine or placental circulation. To my mind, there is wisdom in the words of the illustrious Smellie, who more than a century ago wrote the sentence already quoted: "I did not then recommend the use of" the long forceps, "because I was afraid of encouraging young practitioners to exert too great force and give their assistance too soon."

No. 737 Spruce Street, Philadelphia.

CHONDROMA OF THE VAULT OF THE SKULL.

Reported by J. P. Crozer Griffith, M.D.

MICHAEL S., aged 29, a German, married, by trade a tanner, was brought to the Presbyterian Hospital in Philadelphia on the night of June 12, 1882, during the service of Dr. De F. Willard, through whose kindness I am enabled to report the case:

At the time of admission, the most notable feature of the case was the position of the head, which was thrown back upon the shoulders to the farthest extent possible. The patient also seemed to be unable to walk without assistance, and complained of violent headache, chiefly frontal.

There was no pain at the back of the neck, but any attempt on the part of another to forcibly elevate the head drew from him a cry of suffering.

He was at once put to bed, and a saline purge and large doses of bromide of potassium ordered. By the following morning his condition was easier, and he could hold his head in the natural position. His hair, which was very heavy, was cut, and there then appeared on the anterior portion of the vault of the skull a tumor about the size of a walnut.

The patient had also slight internal strabismus and a peculiar prominence of both eyeballs, with some injection of the conjunctiva.

The right eye he kept closed much of the time, and complained of some pain in it. An ophthalmoscopic examination, made by Dr. George Strawbridge, revealed a condition of double-choked disks.

The tumor was firmly attached to the bone, and was slightly tender on pressure, especially at the anterior portion. The skin and hair covering it were of natural appearance.

Peculiar coppery patches were observed upon the arms. These were suspected of being of a syphilitic nature, but were attributed by the patient to the bites of insects. The post-cervical glands were slightly enlarged.

An attempt was made to obtain some previous history, but with poor success, inasmuch

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as his ideas were evidently considerably confused, and his statements were often contradictory. As nearly as could be ascertained, he had first had headaches in 1870, after having been in the Franco-Prussian war. These headaches had occurred with irregularity, though often several times during a week.

About a month before embarking for America, while at work in his garden, he became dizzy and fell in an unconscious condition, in which state he continued for about an hour. After regaining consciousness he suffered with severe headache and dizziness for a week, being confined to bed during a portion of this time. His headaches then were as severe as at the time of admission to the hospital, and he had the same tendency to throw the head backward.

Two weeks after this time, and one week before leaving Europe, he for the first time noticed the tumor, then approaching the size of a hazelnut.

Unfortunately, no precise knowledge of the date of embarkation for this country could be elicited. March, April, and May of 1882 were each named by him. Thus the presence of the tumor had been recognized for from one and a half to three and a half months. During his voyage, and up to the time of admission, he had suffered severely from almost persistent pain in the head. The patient claimed to have been a temperate man, and denied all syphilitic taint. While in the hospital, the pain was at least partly controlled by bromide of potassium. Examination of the urine revealed nothing abnormal. Iodide of potassium was tried, but without effect; and at the end of the first week the tumor had increased very perceptibly in size, and to the right of it appeared a smaller and flatter nodule, not at this time connected with the larger growth, at least externally. Over this new tumor, at about the position of the coronal suture, extended a groove or depression. This, it was supposed, was produced by the firmer adhesion of the periosteum at the suture-line. The patient now became partly delirious, and attempted at times to leave his bed, insisting that his friends had visited him and that he must leave the city.

From this time onward his mind became continually more clouded, but at no time was there any coma, until three days before death, when, with pupils dilated, he sank into a profoundly comatose state. During the last two days of life he appeared completely paralyzed, being unable even to swallow, and rendering rectal alimentation necessary.

Meanwhile, the tumors had been growing very rapidly, and the larger one had become exceedingly tender and rather soft in parts.

On the first day of July the growth was aspirated, but only a few teaspoonfuls of fluid were obtained. This was of a blood-red color, and under the microscope appeared to consist of blood, with a large number of contained leucocytes. A few hours later he died, nineteen days after admission to the wards.

At the post-mortem examination the following conditions were found. The chief tumor, which was of oval shape, was situated in the median line, commencing just above the line of the frontal eminence, and extending backward for a distance of four and a half inches. Its greatest breadth was three inches, and its greatest elevation from the surface of the skull one and a half inches.

To the touch it was soft in the centre, almost as though it contained fluid. Around the line of junction with the skull could be felt a peculiar crepitus, as though loose plates of bone were under the fingers. The skin covering it was of natural color and appearance.

To the right of the tumor just described was a smaller elevation, two and a half inches long, two inches broad, and with its greatest height one-half inch, shelving off irregularly on its right side, and on the other being continuous with the larger growth, but of much less altitude. The groove over it, before mentioned, had largely disappeared.

On removing the scalp, the periosteum was seen to cover entirely the growths. Apparently there existed a distinct capsule for each tumor, but the union between them was now so intimate that this could not be positively ascertained.

Incision into the smaller growth showed it to be firm, dense, and white, like fibrous tissue. No bone-spicules appeared. Incision through the capsule of the large tumor revealed a very red mass, comparatively soft, in spite of the great number of contained bone-spicules.

On removal of the calvarium it was seen that the total internal projection of the growth was at least partly divided into three lobules. The one on the left of the median line was somewhat larger than the combined bulk of the two upon the right, extending from opposite the frontal eminence posteriorly for four and a half inches. Its width was two inches, and its thickness one and a half inches. The dura mater over it was smooth and entirely free from the brain-substance.

The growth upon the right of the median line reached from three-quarters of an inch above the orbital plate of the frontal bone backward for three and a half inches. It was divided into two lobules, of which the anterior one was two and a half inches long, two inches broad, and about two inches thick perpendicularly; and the posterior one, one inch long, one and a half inches broad, and about one inch thick. The surface of the tumor upon this side was nodulated. The dura mater was at several points adherent to the brain, and at one spot spicules of bone penetrated into the brain-substance.

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The entire internal projection of the growth, except the posterior lobule situated upon the right side, appeared to be of the same structure microscopically as the larger external tumor. This one lobule resembled the smaller external growth, and, from its position, was evidently a part of it.

The brain beneath the tumor was superficially congested, and the veins engorged.

The surrounding bones of the skull appeared healthy until within a quarter of an inch from the mass. At this distance, upon stripping off the periosteum or dura mater, the bones appeared carious and as though worm-eaten. Inside the tumor the tables of the skull were almost, if not entirely, destroyed.

Portions from both the younger and older parts of the growth have been prepared in chromic acid solution, and sections made for microscopic investigation. They resemble each other very greatly, each consisting of a net-work of numerous interlacing, usually large-sized bundles of connective tissue, with the small meshes filled with cells. This connective tissue is imperfectly fibrillated, rather waxy in appearance, and with few meshes; but there is a considerable amount of effused blood visible in the older tumor, the amount of fibrous tissue is perhaps proportionately greater, and there are also present very many spicules of bone. These spicules are probably newly-formed osseous trabeculæ, and not fragments of the eroded vault of the skull. This belief is held because in the younger tumor there are almost no spicules discoverable, and because, were they the result of a later eroding action, they would be found in the centre only, and not, as now, most abundantly at the periphery.

The determination of the nature of the growth will now depend largely on the nature of the cellular element, and will be a matter of interest, because already there has been, I believe, a difference of opinion among some microscopists who have examined the tumor.

Although in some places the cells are embryonic, yet in many other portions they are distinctly larger, round or irregular, single or arranged in groups, with one or more nuclei, and often surrounded by a distinct capsule,—in fact, are cartilage-cells, and the tumor must be a reticular chondroma. The presence of embryonic cells is of course accounted for by the fact, as stated by Cornil and Ranvier, that chondromata do not develop directly from the bone, but that there is a progressive change of the compact substance into embryonic tissue, and a continued inclusion of this in the tumor in the form of young cartilage-cells. These authors, therefore, do not accept the chondrosarcoma of Virchow. Butlin, on the other hand, in his recent book on sarcomata and carcinomata, classifies all chondromata of the bones as chondrofying sarcomata.

A feature which assists in the diagnosis is the appearance of the lobules of the tumor, which seem to grow from *adjacent foci*, and not to spring from a common source. The tumor under consideration might possibly be confounded with sarcoma, carcinoma, or gumma.

But sarcoma never has connective tissue so well developed. Carcinoma has well-formed nests of cells, the connective tissue has reached a more perfect development, and many fully-formed blood-vessels are to be found in the trabeculæ of the tumor. (Moreover, there is always infiltration of the surrounding tissues.) The gumma is flatter, of limited growth, and has, at least in parts, numerous vessels, around which the cells are thickly grouped; as Rindfleisch says, "the adventitia of the vessels is the proper matrix of the syphiloma."

The retrogressive softening of the parts of larger growth must be due either to a fatty and mucoid degeneration or to the conversion of the tumor into a vascularized medullary mass, as sometimes occurs, according to Cornil and Ranvier, or to both factors. An ossifying metamorphosis has also taken place in the older growth.

As to whether the tumor was of subperiosteal or central origin, I have not been able to satisfy myself. The points of differential diagnosis between central and subperiosteal sarcomata, as given by Butlin and others, do not seem to me to be sufficiently conclusive, at least in their application to this case.

Rindfleisch says that both sarcomata and chondromata of central origin distend the bone to a mere shell, and push it before them, only breaking through at points. If this is invariably the case, this tumor must have been subperiosteal, for there is no semblance of bone over the smaller and younger tumor.

Clinically, the case is of interest from the fact that so great a depression of the

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brain could have existed with so few signs of disturbance of its functions; and if the rapidity of growth was as great within the cranium as exteriorly, there was but little time for the brain to accommodate itself to the pressure.

110 South Eighteenth Street.

EMPLOYMENT OF THE BLIND IN JAPAN.

BY W. NORTON WHITNEY, M.D.,
Tokio, Japan.

On a fine day one can scarcely walk a square in any of the more thickly populated districts of Tokio without hearing the shrill whistle of the blind shampooer, as with long stick in hand he slowly feels his way, calling out from time to time his fee for a complete shampoo.

A system of employment for the blind so suited to their condition, affording as it does fair profit and an abundance of healthful exercise in-door and out, certainly deserves at least passing notice.

Shampooing, or perhaps, more properly speaking, massage, as practised by these blind men (called *amma*), consists of a gentle rubbing with the palms of the hands of the surface of the whole body, together with passive exercise of the joints, and a slow kneading of the superficial muscles, more particularly those of the trunk and extremities. The sensation to the subject is usually very pleasant, especially if submitted to after violent or continued exertion, as after a difficult climb or a long walk.

Japanese physicians recommend it in tabes dorsalis and certain other forms of paralytic disorders, as well as in hysteria and some kinds of headache, in lumbago and in many other diseases, also in convalescence from diseases in which there has been loss of power or wasting of the muscles. It is much used, and probably often abused, in cases of difficult labor. One Kagawa, who first employed it for this purpose, called it "the body-regulating art." It is also generally employed after labor to soften the breasts.

Massage is not employed in rheumatism, gout, or acute fevers. Acupuncture, too, was formerly performed by some of these *amma;* and I am told that the examinations for license to practise these, especially the latter, were very rigorous.

The skill and anatomical knowledge sometimes acquired by these unfortunates are truly wonderful, for, besides a gentle touch and an almost instinctive appreciation of the seat of pain, many of them know all the superficial muscles, and can even tell in what position to insert needles for the cure of certain diseases. Unfortunately, scabies has been occasionally communicated by these shampooers, as well as certain contagious diseases,—a fact, however, which does not seem to lessen the demand for shampooing.

I am told that over one-half of the cases of total blindness in former days were attributable to smallpox; and it is probable that purulent ophthalmia and syphilitic diseases were responsible for the larger portion of the remainder.

The number of blind, deaf, maimed, etc., according to the published census of 1875, was 101,587, of whom 63,759 were males and 37,828 were females, the total population at that time being 33,110,825. Of this number it is probable that the greater part were blind, and it is not at all unlikely that in former days the proportion of this class to the total population was still greater, as the gradual institution of compulsary vaccination, the regular examination of prostitutes, and the growing popularity of Western methods of treatment of ophthalmic disorders have tended, on the one hand, to limit the spread of the most potent causes of blindness, and, on the other, to increase the number of eyes rescued from actual loss.

Since the "restoration" in 1868, the ancient laws allowing these blind certain rights and privileges have been repealed, and the profession is now open to all. Formerly the blind belonged to the so-called "long-robed" or professional class, in which were also included those who practised the arts of acupuncture and of divining, the priests and the doctors. Various titles or degrees were bestowed upon the blind upon passing examinations and the payment of certain fixed sums of money. The lowest of these degrees, next to that of the common *amma*, was the *shibun*, which gave the possessor certain rights and privileges and raised him to the rank of the military or two-sworded class. He was also permitted to wear a ceremonial dress on certain occasions and to carry a white stick surmounted by a wooden ball. The fee for this degree was about one hun-

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dred dollars. Upon obtaining the next degree, that of *ko-to*, the blind man ceased to practise the art of shampooing, and became a teacher of music, for which position he had been preparing during the chrysalis state, so to speak, of shampooer. Above the degree of *ko-to* came that of *ken-yo*, or inspector, the fee for which was one thousand dollars. To obtain this degree was considered a great honor, and among its possessors were to be found some very remarkable men. One of these, Hanawa Kenya by name, a professor of mathematics, is said to have possessed such a wonderful memory that he could recognize at once any quotation made from any book in his great library, and could give the title of the book and even the number of the page from which the quotation had been made. It is also said that, although he had been blind from infancy, he knew the names, forms, and meanings of nearly all the Chinese characters in use, and was, besides, a writer of note.

The highest degree or rank was that of *so-roku*, of which there were, I understand, only two holders at one time in each of the capitals. All the appointments and honorary titles were conferred through these *so-roku*, who also acted as judges in matters relating to their own people.

A certain amount of authority was attached to the lower ranks, and no doubt added considerable to the income of the possessors. On occasions of great rejoicing in any household, as, for instance, a birth, a marriage, or elevation in office, one of these blind shampooers would call for a present, which by law it was necessary to make, and which ranged from ten or fifteen cents upwards, according to the wealth and position of the family. The collection of these fees fell to each *shi-bun* in every district in turn, besides which fees were also received from apprentices.

In order that a blind man might travel from place to place, and yet not interfere with other blind practising in these places, his stay in each town or village was limited to three days, during which time only he might receive fees for professional services.

The blind were also allowed to lend money, for which they received high rates of interest, popular sentiment protecting them from loss. A blind man might marry only after he had taken a degree, as this was considered proof that he would be able to provide for a family; but marriages between blind and blind were strictly forbidden. There were societies or guilds of blind men, which afforded their members considerable protection.

This whole system has proved of great utility in giving these unfortunates opportunity of competing on a most favorable footing with their more fortunate brethren, and at the same time stimulating them to higher attainment. Such, indeed, was its success that the blind, unfortunate as they might be in the loss of sight, led happy and comfortable lives, supporting themselves and families, and proving as well a benefit to their fellow-creatures. It is therefore not without some feeling of regret that we see these old institutions passing away, and in their stead attempts being made to care for the blind in large asylums and at public expense.

The experiment of teaching a few of our own blind this most useful art, though, I believe, yet untried, is perhaps worthy of consideration, especially as massage is beginning to have an important place in the treatment of so many disorders.

TRANSLATIONS.

JACCOUD ON THE TREATMENT OF TYPHOID FEVER.—In the prolonged discussion of the subject of the treatment of typhoid fever before the Académie de Médécine, the parasiticide theory and treatment based upon it were vigorously opposed by Jaccoud, who also gave a rapid *résumé* of his method of treatment which he had employed for sixteen years, and from which he claimed to have had such success as to reduce the ordinary mortality rate of 19 per cent. down to 10.83 per cent. He based his treatment upon two characteristics of the disease,—first, the adynamia; secondly, the abnormal calorification. From these result two great therapeutical indications,—first, to spare and sustain the forces of the patient from the beginning; secondly, to remove a portion of the heat produced, and to restrain the heat-production. These indications are filled by a systematic method of treatment instituted as soon as the diagnosis is made. It comprises two parts,—first, alimentation with broths, wine, and especially milk, in the quantity of one or

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two litres per day; and, secondly, by the use of alcohol, which is administered in the dose of 30 to 80 gm. daily in punch taken by spoonfuls. To this alcoholic drink Jaccoud adds extract of cinchona; this is continued during the entire duration of the fever. In this manner he seeks to fulfil the first indication to correct the adynamia, and also, through the use of the alcohol, to diminish slightly the combustion of the tissues and the production of heat.

From the beginning he also seeks to reduce abnormal heat by having the body sponged off with aromatic vinegar and cold water from four to eight times daily. Should the temperature continue as high as 40° (104° F.) for several days in spite of the sponge-baths, he resorts to antipyretic agents, such as bromhydrate of quinia and salicylic acid, the doses being the same. The first day he gives no more than 2 gm. at the most, taken in one dose, either in the morning or in the evening. The next day he reduces the dose by .50 gm., and on the day following .50 gm. more of the remedy is continued so long. He allows the patient to rest after the second or third dose for at least forty-eight hours, and then he recommences.

On account of the antiseptic qualities of salicylic acid, he gives it the preference, except in the presence of the following contra-indications: first, alcoholism; second, violent cerebral symptoms; third, feebleness of the heart; fourth, symptoms of renal disorder. But these conditions are not contra-indications to the use of the quinia salts, nor would they interfere with their employment. In case pulmonary congestion should occur, dry cups are used to the number of thirty or forty per day.

In conclusion, Jaccoud protested against overdosing, and paid his respects to the bacteriaphobists who treat typhoid fever on the theory that it is a parasitic disease, this leading them to an immense abuse of salicylic acid, phenic acid, etc., without concerning themselves regarding the tolerance of the individual. He said that "the result is that in striking at the microbe they knock down the patient. Even when it shall be shown that the fever is caused by a bacterium, the physician ought never to lose sight of the human being whom he has under his charge: he should take into consideration the individual constitution of the patient, his powers of resistance, and the effects which the means employed may produce upon him; if not, he will be the victim. One cannot guard himself too much against these sudden storms or hurricanes of fashion in therapeutics."—*Bulletin de l'Acad.; Revue de Thérapeutique.*

HYDROPHOBIA AND HOANG-NAN.—Dr. Barthélemy, in a communication recently read before the French Academy, formulates the treatment of hydrophobia by hoang-nan, of which the following is an abstract:

One of the first effects of hoang-nan is to calm and relieve the mental faculties, while to the digestive organs and nervous system it gives tone, and calls into play all the energy of which they are susceptible. It is evident, finally, that an organism saturated with hoang-nan (either alone or combined with sulphide of arsenic, according to the native formula) forms a medium very unfavorable to the growth of parasites. The approved method of administration for the prophylactic treatment is, according to this writer, to commence with a moderate dose, say thirteen to fifteen centigrammes, which is to be augmented by an equal quantity each day until slight twitchings or muscular rigidity are produced, the patient at the same time abstaining from alcoholic liquors and exciting food. It will suffice to increase the dose, at the most, to one and one-half to two grammes daily. In all cases the effects are proportional to the doses, and the author states that there is no danger of any cumulative action of the drug. This, which is pursued as a preventive treatment, contains nothing especially repugnant to the patient, and is not incompatible with his ordinary habits of life.

When the nervous phenomena indicating an outbreak of rabies have appeared, the patient is in imminent danger. The treatment must now be pushed, giving two or three grammes daily of the powder of hoang-nan, say in a dose of fifty centigrammes each half-hour, until the physiological effects of the plant are manifested, thus announcing the fact that its curative action may be counted upon.

In a case attended in Tonquin by M. Pernier a still more energetic course was pursued. In a case of well-marked hydrophobia he gave at first two grammes of hoang-nan, and soon afterwards about one

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and one-half grammes. At this moment the patient fell backward as if struck by lightning, cold, and with clenched teeth. In about a quarter of an hour these violent effects disappeared, but the phenomena of rabies did not return.

Finally, it seems of the highest importance to suppress as much as possible all sources of external irritation which may excite spasms, and to keep the patient calm and quiet.—*Revue de Thérapeutique*, February 15.

Syphilis in the Monkey.—M. Martineau presented a wax model at a recent meeting of the Academy, representing two characteristic chancres of the penis, produced experimentally upon a monkey. The sores appeared on the twenty-eighth day after inoculation. On the eleventh day of their evolution, these chancres, which had a grayish appearance, took on a red coloration (like bacon-rind), and cicatrization proceeded steadily until they were completely healed on the twenty-eighth day of the evolution of the lesion,—that is to say, fifty-six days after inoculation. Since his first communication upon this subject the glands of the groin have become more enlarged, and there are indurated and enlarged ganglia in the axillæ and in front of the larynx. On the day the chancres healed, four syphilitic erosions appeared on the penis, leaving no doubt of the constitutional infection. These mucous patches made their appearance, therefore, as in man, between the seventh and eighth week. No marked evidences of fever were present.—*Revue de Thérapeutique.*

Toxic Effects from Pelletiérine Tannate.—In *La France Médicale* (No. 20), Dr. Brute reports a case in which serious symptoms of poisoning occurred after giving the popular tæniafuge. A man 35 years of age was ordered .40 gramme of pelletiérine tannate, to be taken in the morning fasting, the dinner and supper of the preceding day being composed of milk only. A half-hour later he was directed to take thirty grammes of castor oil. Before evening he passed two large tæniæ. The next morning he took a short walk, but was seized with vomiting, profuse watery diarrhœa, and atrocious colic, with cool skin and the symptoms of collapse, as in cholera. Hypodermic injections of morphia, external heat, and the administration of coffee and brandy, and rubbing the extremities with hot flannel, brought about reaction; the surface grew warmer, and the patient recovered. On the following day he was quite well.

The Etiology of Toothache.—From an examination of a large number of school-children and soldiers (Robinowitsch: *Wratsch.*, No. 44, 1882) the following conclusions were attained:

1. Large quantities of sugar (confectionery, etc.) favor the destruction of the teeth (by chemical action).
2. The drinking of hot tea, and the habit of taking immediately after hot soup cold drinks, such as ice-water or beer, constitute a thermic origin of decay of the teeth.
3. The children of well-to-do parents have more carious teeth than poor children.
4. The military service, especially in a Northern climate, appears to afford circumstances especially favorable to caries.
5. In girls the teeth are oftener found diseased than in boys.
6. The third lower molar is most frequently carious.
7. On the contrary, those that are least often affected are the canines, and after these the incisors.—*Deutsche Medicinal Zeitung.*

Sclerotinic Acid in Pulmonary Hemorrhage.—Dr. Planellas, of Barcelona, in cases of tubercular disease of the lungs where hemorrhage occurs, uses ten centigrammes of sclerotinic acid given in a pill, repeated every half-hour or less frequently. In urgent cases it may be administered hypodermically. It commences to act in doses of two centigrammes.

Sclerotinic acid, obtained from the ergot of rye, is feebly acid, is soluble in water, and without much taste. It diminishes the excitability of the medullary centres and lowers the blood-pressure.—*Revue de Thérap. Méd.-Chir.*

Relation of Rachitis to Syphilis.—A case of rachitis in the service of Dr. Lannelongue, who reported it to the Société de Chirurgie of Paris, terminating fatally at three years of age, showed in the viscera evidences of inherited syphilis, and in the skeleton the lesions of rickets, all the bones being characteristically affected. The disease was traced to maternal syphilis contracted several years previously.—*La France Médicale.*

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PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, APRIL 7, 1883.

EDITORIAL.

THE PREVENTION OF THE SPREAD OF SYPHILIS.

THE great unsolved sanitary problem of the day is, unquestionably, the prevention of syphilis; before it all other questions affecting the public health sink into comparative insignificance. It has been estimated, by a careful writer, that two millions of people in this country, out of a population of fifty millions, are affected by some form or phase of syphilis, and "that thirty thousand males are daily infected with venereal poison in the cities of the United States, a large proportion of whom are residents of inland and country towns, whither they return to spread the contagion." Sanger, writing twenty-five years ago, estimated that more than a million and a half cases of syphilis occur every year in Great Britain.

The close relationship between prostitution and syphilis, which, as a rule, is very plainly one of cause and effect, has led some recent writers to approach the question with the idea that State regulation of prostitution and the repression of venereal disease are phrases so nearly synonymous as to be interchangeable. Physicians, as such, however, it is readily seen, should consider the subject from a sanitary standpoint only, and therefore should avoid discussion of the ethical and sociological problems connected with the subject. The moralist and the political economist are more nearly interested in these aspects of the question, and naturally resent the interference of the medical profession, which, we repeat, has nothing to do with prostitution except in so far as it constitutes a menace to the public health.

With reference to the results of regulation of prostitution, it is undoubtedly true that, as regards the army and navy, such regulation, with the establishment of lock hospitals, has been followed by great improvement in the health of the men and marked reduction in the number of cases of disease. The same in effect is reported as resulting from the operation of similar restrictive measures in Japan. The relationship existing between the governing power and the individual in these two instances, however, is quite another thing from that existing in civil life in great cities, and, in point of fact, where it has been attempted in them, it has been demonstrated that the licensing of prostitutes does not accomplish the great object in view,—the prevention of disease; syphilis, it appears, is only conveyed the more frequently by clandestine women, of whom the authorities have no official knowledge,—experience having shown that men can be incontinent elsewhere than in brothels. In the interesting discussion of this subject recently before the New York Academy of Medicine, which appears elsewhere in our columns, an important legal opinion is expressed with regard to a point which is sometimes misstated; it is the control of a prostitute over her person and personal liberty, it being declared that if it can at any time be shown that she has no other means of making a living, she can be legally committed as a vagrant and detained in a hospital.

It is useless to make laws that are so far above the moral sentiments of the community that they cannot be enforced: therefore the hope for the restriction of syphilis lies mainly in education, and in a wise exercise of the power already in the hands of the profession, of diffusing in the community sound knowledge upon this subject. Correct information with regard to the nature, modes of communication, and consequences of venereal disease should be diffused by physicians in every com-

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munity; this is the first and most pressing duty. With regard to prostitution itself, the people cannot learn the fact too soon that prostitutes should be considered and treated as belonging to the dangerous classes. As recommended by Martineau, vagrants of both sexes—in fact, any person arrested on the public streets—should be examined, and if venereal disease is found to be present, they should be sent to lock hospitals for treatment; the existence of the contagious disorder being sufficient to warrant their detention. There should be established free bureaus of information, or dispensaries of the lock hospitals, where individuals can learn authoritatively whether they have syphilis or not, and are in danger of communicating disease; in fact, every obstacle should be removed from the path of any one, man or woman (but the latter especially), for ascertaining whether or not he has the lesions of syphilis, in order that treatment may be instituted early and an infecting focus thus promptly rendered innocuous. Finally, as recommended by Dr. Gihon, the voluntary communication of venereal disease should be punishable by fine and imprisonment.

INDIAN-CORN SILK.

WITHIN the last two or three years increasing attention and commendation have been given in Southern Europe to a remedy which is so characteristically American in its botanical origin that we almost blush to think that its medical use should have been discovered abroad. We refer to the silk or stigmata of the maize, or Indian corn, which is used with asserted most excellent results in uric acid gravel and in cystitis, and also as a diuretic in dropsy. It is affirmed to have an anæsthetic influence upon the genito-urinary mucous membrane which is unrivalled, relieving the pain of nephritic colic, gravel, and calculous affections in a way that even morphia fails to do. Dr. Vauthier, of Belgium, states that its activity is due to an acid, to which he has given the name of "maizenic," whilst more recent writers surmise that there is an alkaloid in it. The infusion has been used (two ounces to the pint of boiling water, taken *ad libitum*). The dose of the maizenic acid is said to be one-eighth of a grain; whilst Dr. Ducaire administers the extract in doses of half a drachm a day.

This remedy has been used in this city to a limited extent for six or seven years; a fluid extract and a syrup of maize are made by Wyeth & Bros. It was brought into use here, it is believed, by Dr. Walter F. Atlee. It has been employed principally for irritability of the bladder and analogous symptoms, and appears to exert a mild diuretic effect. This is not to be confounded with corn smut, *Ustilago maidis*, which has properties very much like those of ergot of rye, for which it has been recommended as a substitute.

THE MARINE HOSPITAL SERVICE.

IN our last number we had occasion to speak of the action of the supervising surgeon of the Marine Hospital Service in regard to the navy department. In the *Sanitarian* of March 15, much more serious charges are made against Dr. Hamilton, and supported by apparently conclusive evidence. It is alleged that the attack in Congress by Mr. E. I. Ellis, with its misrepresentations, upon the National Board of Health was prompted by Surgeon Hamilton.

The supineness of the medical profession in this country undoubtedly is an invitation to any one to prey upon its dearest interests; but possibly there may come a time when it will be found that the wiser course for the permanent building up of the Marine Hospital Service would have been to have fostered, and not to have mocked, the good will of the outside profession.

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LEADING ARTICLES.

SPINA'S STUDIES ON TUBERCULOSIS.*

ANALYSIS BY R. S. HUIDEKOPER, M.D.

FROM the laboratory of Prof. Stricker appears a recent brochure of one hundred and twenty-eight pages, which cannot fail to find a welcome place in every medical library, and which will prove of great interest, whether one is convinced in full or only in part by Dr. Spina's argument.

The introductory explains that the interest which was awakened by the thesis of Koch induced the author to prove the latter's experiments, and that the Vienna results are greatly at variance with those of the Berlin savant. With the peculiar exclusiveness of our Teuton colleagues, Dr. Spina says that the interest was "especially among the German doctors."

Part I., of twenty-three pages, contains an exhaustive *résumé* of the studies of tuberculosis and the theories which have been held concerning it, from the time of its first recognition by Sylvius, in 1680, to the status before the thesis of Koch. It defines the origin of the terms applied in connection with the disease, and the confusion which has arisen by the varied use of the terms scrofulous, cheesy, etc. The author courteously recognizes the historical sketch of Waldenburg, which aided him in the first part of his work, but his own review is so complete that it is equivalent to new. He concludes from the entire reports that anatomists and histologists have yet to determine not only in regard to the contagiousness of tuberculosis, but also in regard to the differential diagnosis in their experiments on animals; also that the microscope had taught us the structure of miliary tubercles, a cellular structure, and an intercellular net-work, with frequently, if not always, giant cells, but that the microscope had not taught any specific sign of true tubercle; one must, however, have the three elements of structure and take into consideration the retrogressive metamorphosis in order to make the histological diagnosis of tubercle.

Part II. follows with the results obtained by inoculation, beginning with the negative experiment of Kortum in 1789, who inoculated scrofulous pus in a boy; and this section includes researches either with tuberculous matter or with foreign bodies. Dr. Spina seems to have overlooked many of the valuable papers of Toussaint. In the review of these reports the author cannot find that any one has shown cases which have become infected by cohabitation, and he shows that all autopsies demonstrate lesions which are progressive from a point of original irritation.

Part III. recalls the experiments which have recently been made in regard to the inhalation of tuberculous material, and of foreign matter, which have produced nodes in the lungs. These reports, like those of inoculation, determine nothing essential. Some are positive and some negative. Dr. Spina demands that a closer examination be made of the air inspired, and that account be taken of the relative chemical components, and of the organic substances contained in it. He shows conclusively, however, that pulverized foreign bodies can give rise to node-formation in the lungs.

Part IV. reviews the reports of feeding with tuberculous products. From these the author concludes that the assertion that the "consumption of meat or milk of phthisical cows can cause tuberculosis in man" demands more positive proof, and that sufficient control experiments have not accompanied the others.

Part V. is a sketch of the history of inoculation and inhalation experiments with pure tuberculous matter, resulting in Klebs maintaining the regular appearance of his "Monas tuberculosum," Aufrecht and Baumgarten claiming the presence of rod bacteria, and Aufrecht finding also cocci, which Baumgarten denies.

At this point appeared the thesis of Robert Koch, which will bear repetition in full for the better appreciation of Dr. Spina's work, and which runs as follows:

1. In the tuberculous organs of man are found rod-like structures, which are characterized by specific chemical and morphological peculiarities from all other yet known parasites. These Koch calls "tubercle bacilli."

2. The tubercle bacilli are constantly found in tubercles, frequently in the sputa of tuberculous subjects.

* Studien über Tuberculose, by Dr. Arnold Spina, Vienna, 1883.

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3. The tubercle bacilli from the tuberculous organs can be cultivated in coagulated and sterilized jelly.

4. When animals are inoculated with the purely-cultivated parasites they become tuberculous.

5. In the inoculation tubercles the parasites are constantly found.

6. From the inoculation tubercle equally pure cultivations can be made.

7. The re-cultivated bacilli are again inoculable.

8. The tubercle bacilli grow only at the normal animal temperature. They are true parasites of the animal and human organism.

9. All control experiments were *without* tubercle formation.

10. The tubercle bacilli appear regularly also in cheesy bronchitis and pneumonia, sometimes in scrofulous glands and fungous joint-inflammations; further in the "pearls" and bronchiectasia of the lungs of cattle and in the tuberculous organs of monkeys and fowls. As the bacilli are not constantly found in scrofulous glands and in fungous joints, only certain forms of these diseases are to be grouped with tuberculosis.

Part VI. begins with the author's own work and analyzes Koch's arguments separately.

First argument.—"The tubercle bacilli react with aniline in a characteristic way."

Dr. Spina finds that *he* can color the bacilli, as well as normal or pathological tissue, with the aniline in either *acid, alkaline,* or *simple water* solutions, and that he can find in them no peculiar susceptibility which differs from other matter.

In support of this he gives minutely the notes of sixteen experiments. Often one coloring method was first used, and then, after washing out, another.

Second argument.—"Bacteria which are not directly concerned in tuberculosis react with the coloring matter differently from the tubercle bacilli."

Dr. Spina colored putrefaction bacteria exactly as tubercle bacilli are colored, for which he gives his experiments No. 16 to No. 21.

Third argument.—"The tubercle bacilli are characterized as formations *sui generis,* by certain external signs,—viz., rod-like, slender, one-fourth to one-half as long as the diameter of a red blood disk, generally five times as long as thick. In tuberculous organs they form compact groups; never any spontaneous, only 'molecular movements,'" etc.

Dr. Spina calls attention to the experiments of Nägelli, which showed that bacteria can alter their form and character with the change of the nutriment in which they may be developed. Reports No. 22 to No. 30 show that Dr. Spina finds variable proportions and sizes of the bacilli, which may present a length of only two or three times the diameter. He also finds bacilli similar in every particular in croupous pneumonia, bronchiectasia, and in the tissue around a seton in a frog's leg. He further questions whether the absence of water in the serum jelly is not the cause of the formation in compact groups, as appears from experiment No. 30. The author here notes that the bacillus of glanders recently advanced by Loeffler and Schuetz does not differ in any way from the bacillus of Koch.

Fourth argument.—"The tubercle bacilli are constantly found in the tuberculous organs of man. Reports No. 31 to No. 54 are divided into four rows and cover a large number of cases:

a. Chronic lung tuberculosis.
b. Sputa from phthisical patients.
c. Sputa from non-phthisical cases.
d. Tubercle of serous membranes.

In a great number of these cases Dr. Spina could not find any bacilli, especially in class *d,* and he adds Kowalski's researches, which substantiate his own in every particular. Special attention is called to the absence of bacilli in the tubercles of the omentum.

"The tubercle bacilli increase only at a temperature near that of the animal body." The experiments in the Vienna laboratory show that this is true only of cultures in the Koch jelly, and that by the employment of other fluids the bacteria can be developed at temperatures between 30° C. and 100° C. By the addition of water to the Koch jelly, a considerable deviation of temperature will still permit the increase of the bacillus.

Conclusion.—This can briefly be resumed in the following:

Inoculating animals with tuberculous material produces a form of nodular growth in the tissues. Indifferent substances, inoculated, cause the same nodes.

The bacillus of Koch has no peculiar

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property which others have not. Several forms of bacteria are found in tuberculous masses. It is not proved that the bacilli in the sputa come from the lungs; they can as readily come from the atmosphere.

Tubercles of the peritoneum which are not exposed to the air contain no bacilli.

It is not proved that tuberculosis is contagious.

Appendix.—This contains references to work which appeared during the printing, and includes support of the Koch theory from Lichtheim, Hiller, Chiari, and Cramer, while Schottelius and Formad cannot agree with the deductions of Koch, the former on clinical, the latter on anatomical grounds.

NOTES FROM SPECIAL CORRESPONDENTS.

MANAGEMENT OF INSANE HOSPITALS.

EDITOR PHILADELPHIA MEDICAL TIMES:

I READ to-day for the first time your editorial on the "Proposed Legislation for the Insane," and, believing that you would not willingly create an incorrect impression in any cause, I venture to ask that you publish the following statement. You say, "under existent law, when a patient has once been legally committed to an asylum, he can be detained there indefinitely by the superintendent, until he forces his way out by the legal processes." The *truth* is that the person or authority who commits a patient can take him away *at pleasure*, without any delay or any legal process whatever. A husband commits his wife, or a friend his neighbor: he can take the patient out of the hospital whenever he pleases. The party responsible for his maintenance in the asylum can do the same, unless this responsibility, instead of being assumed voluntarily, is the result of legal process. Directors of the poor placing a patient into a hospital have exactly the same authority of removal. It need not be stated that this power of removal must carry with it the power of visitation,—were it ever disputed.

Whenever a patient is committed to the hospital by court, that court of course orders him out whenever it sees fit.

These three methods embrace practically all the ways in which patients are received into hospitals.

Now, so long as the hospital authorities are in accord with these three committing parties—viz., friends, or poor-directors, or courts—that the patient should remain, he is held as against any third party who may claim his discharge. But the law gives such a third party the right to bring the case into court on a writ of habeas corpus, and a rehearing may thus be obtained, and former decisions of court, or the judgment of hospital superintendent, friends, or poor-directors, all be overruled, and the patient set at liberty. It would seem that a candid person with sufficient practical knowledge of all the facts to entitle him to an opinion could hardly ask anything more.

But how far is the condition of things as here stated removed from that represented by the popular press, and, in a measure, by your article! Is it just that hospitals should be held up as prisons, and the superintendents of them as turnkeys and mad-house keepers? There are plenty of valid arguments for additional lunacy legislation, without setting up men of straw and by them putting into needless anxiety families who have insane members.

Respectfully,

JUSTICE.

March 24, 1883.

CINCINNATI.

CINCINNATI has certainly contributed her full quota to recruit the ranks of the medical profession. The graduating class of the Medical College of Ohio numbered one hundred and two; that of the Miami College, forty-one; that of the Cincinnati College of Medicine and Surgery, fifteen; in all, one hundred and fifty-eight regular graduates,—together with a miscellaneous lot of eclectics, homœopaths, vitopaths, etc. None of the colleges of this city require more than a nominal three-years course of study, with an attendance upon two full courses of lectures. Probably the majority of the graduates do not have a good English education; and only the few possess a good knowledge of medicine.

Quite a number of students remain here during the summer, in attendance on the clinics and hospitals. Of course these are the better class of students, and are generally preparing for a hospital examination. The Ohio and the Miami Colleges are holding spring terms, which are fairly well attended. It is the custom here to have lecture at the spring session the younger aspirants for professional honors, who here train for college positions proper as opportunity offers.

Training-School for Nurses.—It is announced that a training-school for nurses will open in the amphitheatre of the Cincinnati College of Medicine and Surgery on March 26, to continue six weeks. There will be lectures, chiefly by the professors of the Cincinnati College, on medical and surgical nursing, nursing of contagious diseases, in the lying-in room, of infants, and on hygiene, dietetics, physiology, anatomy, and chemistry.

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Of course the instruction will be, for the most part, didactic.

Within the last two weeks the wives of three of our well-known physicians—*i.e.*, Dr. W. W. Dawson, Dr. Jas. T. Whittaker, and Dr. Geo. E. Walton—have died. Mrs. Dawson had been an invalid for some years; but the other two deaths were quite sudden and unexpected.

There is a great deal of sickness in the city now, as might have been anticipated from the damp condition resulting from the recent high water. The diseases are for the most part acute affections of the respiratory tract and lower bowel, and continued fevers distinctively malarial in origin.

One of our prominent dailies, in a recent Sunday editorial, defended fashionable women in their taking preventive measures against child-bearing. The editor thought that there were too many people, and that the women were right in adopting methods (he suggested continence) to prevent their too rapid increase.

A. B. T.

March 21, 1883.

CHICAGO.

FOR several months it has been rumored that the faculty of our College of Physicians and Surgeons were not agreeing very well, and that it was not exactly smooth sailing for certain members.

The college was organized October, 1881, it is said in the interests of a higher and more systematic and thorough course of medical education than could be obtained in ordinary medical colleges. The faculty was appointed for one year, to be reappointed at the expiration of the first year. The board of directors held the meeting for re-election of the faculty March 17, and, much to the surprise of those not of the board, four of the faculty were dropped: Dr. Carpenter, of the chair of Practice of Medicine; Dr. French, Surgical Anatomy; Dr. McCoy, Medical Chemistry; and Dr. Jenks, Surgical Diseases of the Genito-Urinary System. Some of the gentlemen who failed of a second election assert that they have not been frankly dealt with, and that more than one of their number gave up a lucrative practice elsewhere to accept the appointment, and that as the matter stands they are not only at great pecuniary loss, but unjustly embarrassed in their relations to the profession. The directors claim that they have acted upon a plan understood at the time of organization, and that each vote was cast upon a series of questions,—viz.: "Is he a capable and systematic teacher?" "Are his moral character and habits such as would reflect credit upon an educational institution?" "Is he honorable and trustworthy in his treatment of and dealings with his colleagues?" "Is he in accord with the general policy of the school, especially in its requirements for the admission and graduation of students, and its graded system of instruction?"

Investigation into the affairs of our County Hospital has assumed quite a different phase. It now appears that the charges preferred against the warden and others have never had any foundation in fact, but were the result of a conspiracy on the part of one of the commissioners. The grand jury, now in session, have found an indictment against Commissioner Albright, and the imbroglio will again be aired in the courts.

Pneumonia has been unusually prevalent, probably in consequence of the trying character of the weather and the presence of malaria.

The graduation exercises of the Chicago Medical College took place to-day at the Grand Opera-House, forty gentlemen receiving the M.D. degree; the banquet in the evening was largely attended, and a good time was enjoyed by those present.

The erection of a morgue is likely to be delayed for some time longer, much to the distaste of our Health Commissioner.

March 27, 1883.

CORRESPONDENCE.

LONDON LETTER.

AFTER a long spell of rain, the sun has at last established itself as an obvious fact, and a half-drowned country is drying up. After this winter the cloud of agricultural depression will settle down closer than ever. Farmers are going bankrupt, and landowners are finding that Tom Carlyle's dictum that "the easiest of all trades is the owning of land" may be true, but that, at present, owning land is not free from care. Of course, of old, bad crops made a dear loaf; but now the great West is opening up, and the English farmer is deprived of the consolation of high prices for a small harvest. But I forget: this is not an essay on the prospects of agriculture, but a letter to a medical journal. The weather has been a test for all livers which are not in first-rate working order; and that means a very large proportion of our population. Sudden oscillations of temperature and barometric pressure, often repeated, have affected the huge gland. Of course its circulation has varied with these oscillations, and perhaps other disturbances have occurred. Anyhow, a few days of a southwest wind, a high temperature, and a damp atmosphere (all combined), and then a sudden wheel of the wind into the northeast, with a lower temperature for a day or so, and then back into the moist southwest for a few days,—such have been the sudden changes which have disturbed the working of the liver and caused what is termed in fashionable circles "bilious chills." Dr.

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Wickham Legg, in his learned treatise on the liver, casts scornful doubts on these same "bilious chills;" but even his erudition cannot overthrow what are clinical facts. If a patient has feelings of malaise with panphobia, irritability with depression, a tongue with a yellow fur on it, it is pretty certain that his liver is "out of order," even if he have neither disordered stools nor lithates in his urine. Certain it is, too, that hepatic stimulants do good to such sufferers. How can one, then, escape the conviction that the liver is at fault? The liver has been regarded as an important viscus since the dawn of medicine; recent investigations into its functions have not tended to lessen its importance. Nor does the pace at which we live nowadays improve matters. The exotics of the social fabric alone had "livers" in the days of old. Busy working-people knew nothing of the possession of such viscus, unless it was after those periodical surfeits to which the Anglo-Saxon has ever been weakly partial, unless he is greatly belied. Consequently, amidst all the financial gloom, the doctor has been busy, and perhaps the pill-vender has flourished, though possibly the undertaker has not been excessively active. Liver maladies are not usually fatal, fortunately for the profession; and we take up sanitation, hygiene, and prophylaxis as earnestly as we like, without much prospect of starving for our pains. The public looks on and chuckles at our unselfish industry, and perhaps entertains some hopes that the doctor's bill is going to be a relic of the past, and nothing more! But this pleasing vision will never be realized. Weakly children are being raised by means of malt-extracts, cod-liver oil, and other modern measures, to become in turn the parents of weaklier children.

Add to the constitutional feebleness the demands of making a living, and then the necessity for pepsin and pancreatic preparations is apparent enough. Artificial digestive agents are becoming a part of the necessaries of life, and will ere long, it is to be feared, be handed around after meals as regularly as the conventional cup of coffee itself. Help the stomach! Certainly; why not? But how about the liver? Its work cannot be done for it; and when it becomes disturbed, and, instead of elaborating albuminoids into serum albumen for the liquor sanguinis to carry to the tissues, breaks them down into bile-acids or urine solids, what has to be done? Why, of course, put the patient on readily-digestible food, not too rich in azotized matter! Certainly; but who ever yet knew the patient like farinaceous food, when that food seems particularly indicated? "I don't like starch," the individual exclaims, with a look as if some disagreeable object had forced itself upon the consciousness. Very likely not; but it is no use speaking disrespectfully of the staff of life. The body-fuel is "animal starch," and that is derived from vegetable starch. Besides, it need not necessarily be prepared so as to suggest the laundress. Farina can be prepared in various ways, and is readily mixed with condiments. Farina-eaters we are going to be, if things go on. In a little time a meat-eater will be looked upon as a prodigy, and the pig will only be cultivated for lard, which will be mixed with his pancreatic secretions, and for his pepsin. The rest of him will go to feed other pigs. But suppose that the digestion of the pig should fail, where will mankind be then? Well, mankind will be putting its affairs in order, and preparing for the last suit, a coffin. It will be high time for it to depart! Despite the elegant preparations which come over the Atlantic in such profusion that the English manufacturing chemist is beginning to think that his time has come at least, if some other persons may linger on awhile, the race for life, the emulous competition which inspires us all, is telling unmistakably. There is not only the "overworked man," who is propped up until a long holiday once more endows him with vigor; there is the "hard-worked man," who likes work and enjoys it, but who has neither the spare time nor the spare energy for battling with illness. Every particle of his energy is consumed in his work: how can he afford to be ill? Certainly, his remark is a very reasonable one, but then he is liable to be affected by slight exciting causes. His resistive power is small; his recuperative power is less. When he is ill, how long does it take him to get well? A pretty long time. He is not like the typical country squire, who toils to get an appetite and a sound night's rest, and who has lots of spare energy to throw off illness, and who revels in convalescence. With him illness is a recreation,—"something to occupy him," in fact. Not so "the hard-worked man," now so frequently met with. He may indulge in the syrup of the hypophosphites or swallow pills of free phosphorus, but his nervous system does not rally very readily. If he will take a holiday, which he will not do unless absolutely compelled, he is soon well; but while continuing at work, how can he rally? This is an aspect of the modern patient which is forcing itself upon one's attention more and more every year that rolls past. Our armamentarium of remedies is as full as the Queen's arsenal; but, nevertheless, rapid cures are growing less and less attainable, amidst city populations at least. More skilful methods of attack are being required, and meet with moderate success. The old-fashioned quinine and iron is inoperative with a large number. The tincture of steel of the past could not be assimilated, unless by a cowherd, and he has disappeared; fences have done away with him. Medicines appropriate to him are following him fast. Dialyzed iron has taken the place of the

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standard remedy of the past. An infant could secrete its own diastase up to a recent period, but the parotid gland is feeling the palsying hand of the nervous exhaustion which is settling down upon an overwrought people. The Jew is no longer conspicuous for the feebleness of his digestive organs. Gentiles are going his way. Thought is embarrassing the assimilative processes. Are we to think ourselves off the face of the earth?

School-boards, education, intellectual culture, are all in league to put down the belly. The pig has to lend us the requisites to digest our food. A pretty pickle we are in, clearly. The swine fed our remote ancestors; now he has to do the work of digestion for us, at least so far as primary digestion goes. But he can do nothing for the liver. Perhaps not; but, the chemist says, be of good cheer. Ipecacuanha is a fine old remedy of well-established reputation for a long time. Then he offers euonymin, iridin, baptisin,—all hepatic stimulants; while the House of Guelph rests calmly confident in sulphate of soda. George IV. lived fast, but he was not always young. We habitually regard him as a youth, or at least only of middle age. Yet he held on till his age was sixty-eight, and then his heart succumbed to gouty changes. Great is the utility of sulphate of soda, albeit its taste is not attractive. If such vigor be displayed by an old race,—and the recent advent of princelings augurs well for the future continuance of the Guelphs,—something has been done, and is being done, for the liver. Perhaps the Guelphs were rather poor when they first came to England; but they have always had enough to eat for a good many centuries. The failure of the digestive viscera from generations of good living does not find any illustrations in them. Perhaps their viscera have grown accustomed to a liberal dietary. Not that they have invariably been given to good living, for George III. was very sparing in his food, if he was impressed with his prerogative and unwisely determined in the matter of the revolted colonies. But betwixt persons who can spend a large portion of their time in the open air and the city toiler, condemned to long hours in a badly-ventilated room, while the outside air is none of the freshest, there is no comparison. The city toiler easily gets down, but then he does not easily get up. It is easy to drop, but it is a long, toilsome climb to get up again, handicapped as he is by the demands upon him. His recovery is retarded; nor is it easy to see how it is to be expedited. If he could be sent to bed for a few days' rest, as he would be if he sprained his ankle, then all might be well for him; but he still lives under the impression that he "can fight it off," as his forefathers used to do when any physical trouble overtook them. Certainly they could, in a leisurely age when ships were slow sailers, when distances were comparatively great, and there was neither steam nor any electric telegraph. That last it is which is the doctor's great friend. All day long there is the telegraph-boy with his sharp summons and the emotion which is inseparable from the nature of the message sent. When a man only got his letters in the morning he was pretty safe from surprises for the rest of the day; but with the telegraph he has no remission from anxiety, and is on tenter-hooks all day long. The fluctuations of the Bourse at Paris or Berlin are quickly made known to him, and even the variations in beeswax. What chance have the assimilative organs, so intimately related with the emotions, of preserving their even way amidst such tumult and disturbance? All the hepatic stimulants, old and new, cannot keep the liver straight amidst all the emotion which is perpetually passing over it. What hepatic measures Dr. Andrew Clark prescribed for our Premier when he went on his restorative holiday, and from which he has returned with a new store of energy, are unknown to me. One thing is pretty certain: he was not dosed with chloral. Sleeplessness adds greatly to the hard-worked man's troubles. Above all things, he must have "a good night" in order to feel equal to his work next day; and too often he does not get it. He does not like to consult his doctor; he does not wish to be thought nervous: so he invests in some chloral, "the safe sleep-bringer," as it was called before its bad qualities were suspected, and doses himself. Perhaps he succeeds, perhaps he does not; but the effects of the chloral are felt in the liver, and they are not invigorating. The disturbance of the day is followed by the toxic effects of the night-draught, and the poor brain-toiler has his assimilative organs more thoroughly upset than before. What is to be done with such a man? His motives are excellent, his conduct very praiseworthy from every point of view but the doctor's; and from his stand-point the whole thing is rank folly. Maybe; but business people are bent on other matters than what the doctor thinks. They think about him when the mischief has been done, not when it is being done. When convinced that it is high time something must be done, the man wends his way to the physician's consulting-room and gets some advice, which he probably takes. Perhaps it is a long voyage, involving the time he has saved by long overwork; and that is disagreeable. The work has been done, and the expensive voyage, with the loss of time, is the actual reward. The work has been thrown away, that is all. Or maybe a briefer holiday will suffice; but all the same, a big holiday or a little one, there is so much time lost, which has to be regained. Stop, my good-intentioned acquaintance. "Regained!" For another spell of overwork, to be followed by a more complete break-down. Is that your design? Your in-

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tentions may be excellent, but the doctor will tell you that you are meditating another piece of double-distilled folly. That is not feasible, if you please. You must reconcile yourself to the inevitable. Nature has placed bounds to your aspirations; your assimilative organs are not equal to the efforts you meditate. You can only lift five hundred pounds, and will do well not to strain yourself by trying in vain to lift eight hundred. Other men do it, you may exclaim. Yes, perhaps they can; but you cannot; and you only injure yourself in trying to do what is impossible. Very hard! Possibly. There are many things which might be improved in this imperfect world. But we will have to accommodate ourselves to the world: we cannot alter it. So in the striving, hurrying age men wear themselves out faster and on a larger scale than ever. We want to be at thirty where our fathers were at sixty. But it may be questioned not only how far this can be done, but how far it may be attempted with impunity. The demands of modern life are not only bringing new diseases,—as general paralysis, for instance,—but they are lending new aspects to old familiar maladies. We see biliousness in the new aspect of a more chronic condition, neither so easily treated nor so readily cured as it used to be. A blue pill and a black draught sufficed for our ancestors; but the overworked, or even hard-worked, man of to-day is not a desirable subject for the exhibition of mercury. Even those who do not tread in the footsteps of the late Prof. John Hughes Bennett, who regarded mercury as a poison, and nothing more, will have some qualms of conscience about prescribing mercury in any form to a hard-working man, unless, perhaps, when he is the victim of specific disease. So it is not well to give calomel; and we fall back on less fashionable hepatic stimulants; and the patient slowly and by degrees climbs up again to what is his normal state of health, be the same high or low. This aspect of the subject is one which must be recognized ere long and taken into the calculations of both medical man and patient. The former must be prepared to expect an intractable malady, while the patient must resign himself with what resolution he may have to a slow, protracted recovery. Of course there is the alternative of a brief but complete holiday. It lies largely with the patient whether he will abandon work for a time entirely, or will prefer to work half-time and distribute his convalescence over a longer period. In the latter case he must make up his mind to a considerable period of small results, with much sense of fatigue in getting through the small amount really accomplished. Whatever plan be adopted, it has its drawbacks. What we, as physicians, have to do is to realize that a hard-worked man is an unsatisfactory patient.

J. MILNER FOTHERGILL.

PROCEEDINGS OF SOCIETIES.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

A CONVERSATIONAL meeting of the Society was held at the hall of the Society, February 28, 1883.

Dr. Elliott Richardson read a paper on "The Use of the Obstetric Forceps" (see page 460).

DISCUSSION ON THE USE OF THE OBSTETRIC FORCEPS.

The President stated that discussion of the following points was especially desired:

1st. That the forceps may be applied at any part of the parturient canal.

2d. That the application of the forceps within the incompletely dilated os uteri is a dangerous operation, to be decided upon with hesitation and conducted with the utmost prudence and caution.

3d. That the application of the forceps at any part of the parturient canal always involves a certain amount of risk to the life or health of the woman: therefore,

4th. That the forceps should only be used with a view of saving either mother or child from some apparent risk of injury greater than any likely to occur from the use of the forceps.

Dr. William H. Parish said that the views advanced in the paper are entirely sound. He would have preferred, however, more advice as to the method of preventing and treating the accidents that follow the mal-use of the forceps. All obstetricians are now agreed that the forceps can be applied with propriety to any part of the parturient canal, with, however, different degrees of risk in different portions of that canal. Their application above the pelvic brim is, in some measure, a capital operation; not that it is so difficult to perform, but it is difficult to deliver successfully. It is rare in such emergencies to find the head placed so that it can be easily grasped, as the occasion for the intra-uterine application of the forceps does not ordinarily arise until the labor has continued some time, and some malposition or resistance has prevented the head being driven forward, and it will most likely be found improperly flexed or even somewhat extended. We will be apt to find it in the occipito-mental or occipito-frontal position (the longest two). The forceps seize the head at a disadvantage, and either slip or compress it badly. The head also in these cases may be found overflexed; even the back of the neck may present. He had applied the forceps above the brim, but thinks it generally inadvisable, and has in some cases used version with better effect.

In the application of the forceps in cases of undilated os, the difficulties and dangers depend on whether it is dilatable or not. It

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may be easily dilatable, and, by slowly and interruptedly delivering, we may dilate the os without danger; but when a tetanic spasm or a cancerous or cicatricial change exists, we may have great difficulty. In such cases we should use some means of softening the tissue, among which hot water, anodynes, and anæsthetics may be mentioned.

In reference to tears being caused by forceps delivery, much depends on the position of the head. A long labor, without instrumental interference, may cause injury. A labor may be shortened sometimes with advantage to the patient, or the forceps may be used to restrain the advance of the head. In primiparæ it is better not to make traction during a pain.

Dr. William T. Taylor agreed with the paper in most respects. The forceps are not only a great blessing to parturient women, but have saved the lives of many thousand babes, whilst they have been greatly abused and have done much injury. They may be applied to any part of the parturient canal, but above the superior strait their application is more difficult; yet when the head is brought below this part it is better to remove them and allow nature to work awhile.

He disagreed with Dr. Richardson's statement that the forceps should never be used unless serious injury to mother or child is likely to result if the case is left to nature. He said the physician's duty was to relieve the suffering mother and shorten her labor when it can be safely done. Labors occurred occasionally in which every condition was normal, yet the uterus would require an hour or more to accomplish unaided what the forceps would complete in a few minutes; and why should we stand idly by and let nature struggle alone?

Dr. Frank Woodbury said that, approaching the subject from the stand-point of the general practitioner rather than that of one claiming special skill or experience, he could say that the arguments of the paper commended themselves to his judgment as being both rational and safe. The subject of the use of the obstetric forceps was one which could not be exhaustively considered in a paper of the limits required; some points were therefore left to be brought out in the discussion. He cited a case in which a resort to the forceps was thought to be necessary, the head being immovable upon the perineum, and the pains having ceased for several hours. The introduction of a catheter into the bladder led to the discharge of a couple of pints of urine, and the case then at once progressed to rapid delivery. Although generally known, he thought it no harm to reiterate this fact, that the introduction of the catheter should be practised, as the rule, prior to the application of the forceps. In some cases it will render their aid unnecessary. In other cases, where the delay is in the first stage of labor, and where an impatient or inexperienced attendant might think the introduction of the forceps into the uterus justified, a large hot-water injection into the rectum will sometimes cause relaxation of a rigid os and be followed by an easy labor. It may be that a full dose of chloral will be efficient should the injection not be available. A third point that occurred to him during the reading of the paper was that when it is necessary to apply the forceps above the brim of the pelvis it is a good rule to take them off after the head is in the canal, in order to reapply them, if necessary, after rotation has occurred.

With regard to the several varieties of forceps, great differences are observed in their powers to do injury. Some are clumsy, murderous weapons, others so delicate as to be mere toys. A happy medium in size and weight is generally preferred at the present day, having the double-curved blades adapted so as to fit upon the sides of the child's head as snugly as possible. It was hardly necessary to state that they should never be applied to any presenting part other than the head, and then only in a real emergency.

Dr. Mills said it is well known that in many cases of arrested cerebral development, idiocy, etc., we have as a cause not hereditary or fœtal defects, but accidents of parturition. A case illustrating this point came recently to the University Hospital. A history of a difficult labor was given, the child's head showing the marks of the forceps. Shortly after birth the child had spasmodic seizures, evidently due to compression of the skull in the motor region of the brain. Any causes acting strongly on the child's head or on the brain may have a tendency to arrest the development of the ganglion cells in the cerebral cortex. The forceps improperly applied may produce localized changes, giving rise to peculiar spasms, palsies, etc. Imperfection in motor, sensory, or mental functions was especially frequent in children born apparently lifeless and resuscitated with difficulty.

Dr. Goodell said he assented to all the points advanced in the paper. The older he gets, the more conservative he becomes in the use of the forceps. He agreed with Baudelocque and Hunter that in the aggregate the forceps had done more harm than good. Men of large experience and special skill may be capable of using them, but many practitioners use them recklessly. They are often applied, he feared, more for the sake of the physician than for that of the woman. He cited a case in which a physician of large obstetric practice, now deceased, had ended a labor by forceps delivery merely to enable himself to be in time for a reed-bird supper, and "reed-birds for supper" had become a by-word among many of his professional acquaintance for an application of the forceps

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NOVELTIES IN MEDICINE!! THERAPEUTICAL REFORM!!

JENNERINE.*

(A Sure Preventive and Cure for Small-Pox.)

Jenner made his great discovery of Vaccine in the year 1798. An ancestor of the discoverer of Jennerine, contemporary with Jenner, appreciating the value of the discovery, and at the same time the opposition which would be made to its application in future years, owing to the possibility of inoculating the human subject not only with the vaccine virus, but with the other humors of the system, as well as the mental peculiarities which were liable to accompany such inoculation, decided upon a course which would obviate such danger, and at the same time render the vaccine virus effective not only as a preventive and curative agent in small-pox, but also as an assistant in bettering the characteristic moral, mental, and physical features of the human race. Recognizing, then, the value of the pure aristocratic blue blood of the English race, as well as a similar strain in cattle, Vaccine Virus was obtained as a result of spontaneous production in a blooded cow of long pedigree. By the special permission of a member of the royal family of England, his arm was inoculated with this virus, and from him the virus was carried to other members of the royal family, and of the nobility of England from generation to generation, under the supervision of the ancestors of the inventor of Jennerine, until the virus which we have has so increased in power and effectiveness, and also brings with it so much of the mental, moral, and physical attributes of the blue-blooded families, that it has been decided in this, the latter part of the nineteenth century, to place this great discovery before the public. Limited space here forbids our amplifying upon the subject. We can only say that the intense vitality of this vaccine, as a result of its transmission through the blue blood of man and kine of ages, enables us to prepare a preparation in powdered form which will preserve its intensity for all time. It may also, by a process also invented by the same person, *be transmitted by electricity over many miles of wire, so that patients may be inoculated in the neighboring counties or States to the residence of the physician.*

Those interested in the subject will please send for special circular.

The name Jennerine, as applicable to this wonderful discovery, will be covered by a trade-mark, in order to protect the medical profession from miserable imitations which are sure to follow.

PASTEURINE.*

Taking up the subject of investigation pursued by the great Pasteur at the place where that savant left off, we have conducted the investigation further towards a practical result in the treatment of disease rather than towards the establishment of any theories as to the cause thereof. Taking into consideration, in the outstart, that all diseases are more or less due to the effect or presence of Bacteria, our objective point has been to invent a compound which will effectually destroy these morbid and deathly agents. Years of careful study on our part and the exhaustion of all published literature upon the subject have led us as usual to a successful issue. We now offer Pasteurine as one of the greatest discoveries of the age. The formula of this compound, in accordance with our usual rules in this respect, is afforded as follows:

Nitrogen, one volume.
Carbonic Acid Gas, pure, anhydrated, two volumes.
Permanganate Potash, two parts by weight.
Pure Oxygen, without admixture, one volume.
Pure Carbon in Crystalline form, one part by weight.

These ingredients should be carefully mixed in an air-tight receptacle of pure platinum of a capacity of five gallons. The mixture should be gently boiled, and the resulting product, a liquid of extreme density and oily consistence, is dissolved in a strong solution of Nitro-Muriatic Acid, the proportion being one part of the liquid by weight to ten parts of the acid. With this result are then admixed the active principles of Eucalyptus Globulus, Carbolic Acid, Nitrate of Silver, dissolved in a menstruum of highly concentrated Sulphuric Ether in the proportion of one part of each ingredient to five parts of the ether. The whole compound is then mixed in a platinum vessel and allowed to precipitate, when the clear liquid is decanted for sale. Further particulars given in circular form.

The name Pasteurine is protected by trade-mark, as it is our invention, and other dealers are warned not to infringe upon our rights. Put up in bottles of one pound. Prices afforded on application.

CONSUMPTINE.*

Physicians have always disputed among themselves, and probably always will differ, as to the cause and treatment of this disease. Throwing aside all questions of etiology, we have aimed our effort at the solving of the question as to whether consumption can be cured, and, if so, how. *We answer this question in the affirmative, and offer Consumptine as the agent.* As a basis for our operations it has been assumed that consumption was due to a gradual wasting of the tissues of the body, with especial reference to the loss of carbon and albumen through the sputa. We propose to restore the carbon to the body in the form of the well-known agent Cod-Liver Oil, and the albumen by means of the albumen of the ostrich egg, which latter we collect in the process of raising our ostriches. Cod-Liver Oil per se has not been very effective, as it has been demonstrated that it must be modified by being perfectly dissolved, not admixed, with water, otherwise the most delicate stomach will reject it, and its nourishing effect be lost. To form this combination has been the greatest difficulty which we have had to overcome, but we have at last succeeded, and offer a preparation which might be more scientifically designated as HYDRO-OLEO-PROTEIN, meaning a chemical combination of water, oil, and albumen. A difficulty we have experienced, too, has been to keep our albumen in liquid form and avoid the tendency to decomposition without destroying its nourishing efficiency. We are aware that the above results have never yet been achieved by chemical scientists, and for that reason believe that the medical profession will hail with acclamation the result of our midnight work. Consumptine contains in every 100 parts of the finished product 65 parts Cod-Liver Oil pure, specially manufactured for us from fresh cod livers, 40 parts of distilled water, and 25 parts of the albumen of the ostrich egg. Put up in bottles of one pound each. Prices given on application.

The name Consumptine will be covered by trade-mark to protect the medical profession from the action of unscrupulous parties.

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* **Note.**—To those who might object to our nomenclature as misapplied, on the ground that the termination "ine" affixed to the name of a plant indicates the active principle thereof, and therefore Jennerine would indicate the active principle of Jenner, Pasteurine the active principle of Pasteur, and Consumptine the active principle of Consumption, we would say,—the custom of specialty makers warrants us in so doing, science to the contrary notwithstanding.

All communications should be addressed to the

NINETEENTH CENTURY THERAPEUTICAL COMPANY,

Please refer to advertising page iv.

Box 2955, New York City.

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BOUDAULT'S PEPSINE.

The only Pepsine used in the Hospitals of Paris for the last 30 years.

Unlike the various substitutes which, in some cases, are but unscientific or incompatible compounds, forced upon the Medical Profession as aids to digestion by extensive advertising, but which, when submitted to the proper tests, are found to be almost useless as digestive agents, Pepsine is constantly gaining in the esteem of the careful practitioner.

Since the introduction of Pepsine by Boudault and Corvisart in 1854, the original BOUDAULT'S PEPSINE HAS BEEN AT ALL TIMES CONSIDERED THE BEST, as is attested by the awards it has received at the Expositions of 1867, 1868, 1872, 1873, in 1876 at the Centennial Exposition of Philadelphia, and in 1878 at the Paris Exposition.

The most reliable tests, carefully applied, will satisfy every one that BOUDAULT'S PEPSINE HAS A MUCH HIGHER DIGESTIVE POWER than the best Pepsines now before the Profession, and is therefore especially worthy of their attention.

With a view of bringing this important remedy within the reach of all, *the price has been materially reduced.* It is now not only the best, but comparatively the cheapest.

In answer to frequent calls, another preparation is now offered,

BOUDAULT'S SACCHARATED PEPSINE,

having the same high digestive power as the amylaceous; it will be sent only when specified.

Boudault's Pepsine is sold in bottles of 1 ounce, with a measure containing exactly 5 grains; also in bottles of 4, 8, and 16 ounces for dispensing.

Boudault's Saccharated Pepsine is sold in bottles of 1, 4, 8, and 16 ounces for dispensing.

Besides Boudault's Pepsine in powder, we offer also

BOUDAULT'S WINE OF PEPSINE.

In this preparation the taste of Pepsine being perfectly disguised, it may be recommended to persons who have difficulty in taking Pepsine in the form of powder.

DR. RABUTEAU'S

(Laureate of the Institute of France)

DRAGEES, ELIXIR, AND SYRUP OF IRON.

"The experiments made in the hospitals of Paris have demonstrated that *Dr. Rabuteau's Dragees, Elixir, and Syrup* regenerate the red globules of the blood with a rapidity never observed with the use of the other ferruginous preparations. These results have been proved by the various *Compt-Globules.*

"The ferruginous preparations of *Dr. Rabuteau* do not cause any constipation, and are perfectly tolerated by the weakest persons."—*Gazette des Hôpitaux.*

Dr. Rabuteau's Elixir is prescribed when some difficulty is experienced in swallowing the Dragees; it is especially adapted to weak persons whose digestive functions need strengthening or stimulating.

Dr. Rabuteau's Syrup is especially prepared for children, who take it readily because of its agreeable taste.

A sample of Rabuteau's Dragees will be sent free to any physician mentioning THE MEDICAL TIMES.

Prepared by CLIN & CO., Pharmacists, Paris. E. FOUGERA & CO., Agents for the United States.

TANRET'S PELLETIERINE

FOR THE TREATMENT OF TAPE-WORM (TÆNIA SOLIUM).

This New Tæniafuge, the active alkaloid of Pomegranate Bark, has of late come into extensive use in France for the treatment of Tape-Worm (Tænia Solium). The results of numerous experiments with it at the Marine Hospitals of Toulon, St. Mandrier, etc., and in the Hospitals of Paris, St. Antoine, La Charité, Necker, Beaujon, etc., have all been most satisfactory. Dr. Dujardin-Beaumetz, Member of the Academy of Medicine, and Prof. Laboulbène, in their report to the Society of Therapeutics, have given it their unqualified approval after the most searching experiments. This preparation is pleasant to administer, and, if certain preliminaries are observed, success will be insured. Pelletierine is prepared by

M. CHAS. TANRET, Pharmacien de 1re Classe, 64, Rue Basse du Rempart, Paris.

DUCRO'S ALIMENTARY ELIXIR,

A COMBINATION UNITING THE PROPERTIES OF

ALCOHOLIC STIMULANTS AND RAW MEAT.

This preparation, which has been used with great success in the hospitals of Paris since 1868, is adapted to the treatment of all diseases requiring the administration, in a small volume, of a tonic able to stimulate and support the vital forces, as *Pulmonary Phthisis, Depression and Nervous Debility, Adynamia, Malarious Cachexia, etc.*

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to economize the time of the physician. He referred also to another case in which the cervical uterine tissue was torn away with the forceps, inducing, of course, fatal results. In his experience many cases of lacerated cervices and lacerated perineums are due to forceps operations. He had operated on three cases of lacerated perineum within two weeks, and will operate on another in the course of a few days. Three of these lacerations were complete, and all were due to forceps delivery. The main safeguard against such accidents is for young practitioners to remove the blades when the head is pressing on the perineum. It cannot be doubted, however, that in certain positions the forceps may act as a protection against laceration; as, for instance, in occipito-posterior position, or in anterior positions with too great flexion. He cited two instances in which deep lacerations had been produced by too rapid instrumental delivery. In an address some time ago before a county medical society, he had advanced conservative views in reference to the use of the forceps, and had been roughly handled by some of the members, who afterwards, from subsequent experience, were led to acknowledge to him the correctness of his position. He agreed fully with Dr. Mills in reference to the injury occasionally done to the head and brains of children by forcible compression with the forceps, especially when faultily applied. In using the forceps in difficult cases, we should proceed with deliberation, making traction for a short time; then either loosen the blades if we stay by the patient, or remove them and go away for a while. On returning, it will be found that the head has become moulded to the pelvic canal, and can be brought down still lower or delivered.

Dr. Goodell exhibited a pair of forceps with narrow blades, devised by Isaac Taylor, of New York, and intended to pass within the os uteri when still very small. Such insertions should not, as a rule, be made when the os is rigid *per se*, for that rigidity can very generally be overcome by means of hot-water injections, or the internal use of morphia, chloral, and chloroform. But when the pelvis is narrow the os often remains undilated because the head cannot descend low enough to bear on it. In these cases he used this narrow-bladed forceps to pull the head down on the os. He also showed a long-handled Davis forceps, with an arrangement, in craniotomy cases, for lashing the handles. In regard to Dr. Parish's allusion to the slipping of the forceps when applied to the head above the superior strait, Dr. Goodell said that this was due to the general practice of catching the head above the brim in its occipito-frontal diameter, which was a very insecure grip. To avoid this, he described the following method of introduction of the blades, by which they are applied to the sides of the child's head, and were then not liable to slip. If the occiput look directly to the left ilium—and this is the most common cephalic position in the simple flat pelvis—the woman is turned over on her back, and her coccyx made to project over the edge of the bed. The right (female) branch is first introduced in the right side of the pelvis, with the convex surface of its blade looking obliquely to the sacrum. By a rapid downward sweep and a spiral twist of its handle, together with upward pressure on the convex edge of its blade by the fingers in the vagina, it is rotated very nearly half of a circle over the forehead to the side of the child's head under the pubis. The left (male) branch is now so held at its lower convex edge by the tips of the fingers of the right hand that its handle hangs down. While held in this position, the blade is introduced, as far as it can be made to go, in the right side also of the pelvis, over the child's left temple, but under the shank of the female blade. The right hand is next carried to the still pendent handle, which it raises, and upon which it makes upward pressure. This movement, combined with a guiding pressure from the fingers of the left hand in the vagina, makes the blade glide up over the sacral side of the child's head. When the branches are united, the lock should press firmly on the tuberosity of the left ischium. Should the occiput look to the right ilium, the same general rules are to be observed. But now both blades are to be introduced in the *left* side of the pelvis,—the left (male) blade first, and under the pubis; the right (female) with its handle pendent. The lock should now press firmly on the tuberosity of the right ischium. When thus applied, the forceps act virtually as a straight instrument until the head has passed the brim and has begun to rotate anteriorly. This application of the forceps possesses the great merits of securing the firmest grip, and of compressing the head in its least vulnerable diameter.

Dr. William S. Stewart endorsed the sentiments expressed in the paper, but thought that the practitioner is often compelled to use the forceps by the general feeling among the laity that they can be used with safety and propriety. If the physician is disposed to allow the labor to continue without instrumental assistance, even if somewhat slow, the friends of the patient will be apt to make unfavorable criticisms. Such is the tendency of the practice of the present. It is best not to insert the forceps into the uterine cavity, but if it should become necessary we should see that the os is dilatable. For the purpose of assisting in dilating the os Dr. Stewart prefers belladonna: it is difficult to apply, but is very efficient. The forceps should be applied carefully; the blades should be kept in the line of the axis of the pelvis, and if so kept may be used without danger.

Dr. Baldwin referred to a form of forceps devised by Dr. J. A. McFerren. They were

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hinged at the junction of the blade with the handles so that these two portions of the instrument could be flexed easily on each other. Dr. Baldwin said these forceps had helped him materially in several cases. He thought they had merit because with them one could draw strongly on the head without pressing directly on the perineum, the joint in the shank allowing the head to dip and take the natural course.

Dr. Addinell Hewson said that he had always been taught that obstetrics and surgery are the same department of medical science, and operative skill was as necessary in the former as in the latter. He had in his possession a pair of Smellie's original forceps, which had been the property of his grandfather, William Hunter's pupil. His own preceptor, Dr. Shekleton, of Dublin, usually applied the forceps early and with extraordinary skill, using a short pair, and placing the patient on the left side with the right thigh and leg strongly flexed. Anæsthetics were not then used in the Rotunda Hospital. Dr. Hewson has of late in his practice employed rapid breathing as an analgesic agent, with the greatest satisfaction,—the consciousness of the patient allowing her to furnish him every aid possible on her part and in accordance with his directions at the time.

Dr. Richardson, in closing the discussion, said that the limits of his paper, read this evening, had not permitted him to consider many of the points brought out in the discussion, nor did time allow of more than an allusion to them now.

It is not possible to lay down absolute rules for the use of the forceps except in a very general way. They can be applied with entire safety by skilful operators. Some operators possess advantages from a higher development of the sense of touch.

NEW YORK ACADEMY OF MEDICINE.

A STATED meeting was held March 15, 1883, FORDYCE BARKER, M.D., LL.D., President, in the chair.

Dr. F. R. STURGIS read the paper of the evening, entitled "*The Regulation and Repression of Prostitution.*"

The problem was one which had long been agitated, but was still far from satisfactory solution,—a fact which was not to be wondered at when the vastness of the subject, and all the factors entering thereinto, were taken into consideration. He would consider the subject under three headings: first, the causes of prostitution; second, the necessity of regulating the evil; and third, the results obtained by legislative action in this direction.

The causes were various, and before taking up that point he referred to the definition of the term, and said it was generally accepted to mean a woman who uses her body for the purpose of deriving an income therefrom, but if it were taken simply in such a restricted sense it would exclude a large number of women who are really prostitutes in all except in name, and who are a most dangerous element in the community.

The statistics concerning the subject on this side of the water were extremely meagre, as it was one which had practically been tabooed, and which was never mentioned except with 'bated breath. The only American work which made any pretence towards giving statistics was that of Sanger, and it was to this that he was indebted largely for certain facts stated in his paper. There was one fact apparent from the statistics of the three nations, France, England, and America,—namely, that for the existence of the evil man was most culpable, indeed, was the prime agent; and this was an important point when we came to consider the question of regulation. In order to make regulation anything like effective, those who were found diseased in the male sex should be restricted as well also as were those of the opposite sex; but it must be acknowledged that this was a matter almost impossible of practical execution.

Probably the next most potent factor among the causes after that of misplaced affection was the love of dress. Another was that of the absence of proper home influence, from death of the mother or drunkenness on the part of the parents, or from crowding in tenement-houses. Another cause, particularly among the so-called higher classes, was a desire for luxury. His own observation and that of his professional brethren went to show that syphilis among the well-to-do classes was increasing every day.

An attempt at regulation had been made in some of the cities of this country, among others St. Louis. About 1869 St. Louis passed a law for the regulation of prostitution, and, from information which he had obtained, it seemed to have worked fairly well, but the opposition to it among the laity was so strong that the plan had to be abandoned. The arguments brought to bear against it were, in the first place, that it was absolutely wrong to recognize and therefore to attempt to regulate any such vice; that it was giving an air of respectability to an evil which had better be kept out of sight; that if it was so bad as represented it would soon reach a culminating point and regulate itself; that in the vast number of cases the regulation of the evil had not been attended with as favorable results as had been expected.

With regard to the evil as it existed in New York, he estimated, from the Parisian statistics and those given by Sanger, that there were in New York to-day about eleven thousand women who were either public prostitutes or clandestine women. It was estimated that the number of persons in the city treated annually for venereal diseases, in both private and

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public practice, was about sixty thousand, of which number probably forty-five thousand suffered from syphilis in some of its manifestations. It was also an important fact to be borne in mind that it was not the women who had plied their vocation for years who were most likely to communicate syphilis in its active forms, but rather the younger women, who had the beauty and attractions of youth and were therefore patronized by the well-to-do classes. Syphilis, again, often existed without the knowledge of the patient, and was therefore more likely to be transferred than the other forms of venereal disease, which presented more acute symptoms and forced themselves upon the recognition of the one affected.

Regulation had been attempted in different countries for many years. Napoleon the First subjected all public women to more or less strict police and sanitary supervision, for the purpose of controlling venereal disease in his army, and some form of regulation had existed in France almost or quite continuously since. England attempted to regulate the evil by passing the Contagious Diseases Act in 1866, and, although it met with considerable opposition, it had been shown that the disease had spread less since than it had done before its passage, particularly so among the public yards and the army, where control was had over both the men and the women. But it was a fact which should not be forgotten that where women were compelled to inscribe and submit to examination, the number of the clandestine class increased even beyond proportion. The author did not believe that public opinion in this country was prepared to accept any such legislation on the subject. There was a natural repugnance to recognizing the evil, to restricting the liberty of individuals from doing what they pleased with their own person, and, therefore, to making women undergo examination involuntarily. He thought that in this country the only hope of restricting the spread of venereal diseases at the present time would be limited to the lower classes of the population, who might, on entering a hospital for treatment, be compelled to remain there until they shall have passed the period of possibility of infecting others. Whatever was done should, at any rate, be done in a strictly business-like way, without allowing sentimentalism to enter into the question in the least degree. While he considered repression as an impossibility, he was of opinion that efforts at regulation rightly directed would prove efficacious and could be successfully carried out, and would prove of decided benefit in limiting the spread of syphilis and the other venereal diseases. Dr. Sturgis then read from the rules, approved at the International Statistical Congress, which met at St. Petersburg in 1872, for the prevention of the spread of venereal disease.

THE PRESIDENT remarked that it had always seemed to him a great mistake frequently made in legislation of passing laws which were not sustained by public opinion or which were in advance of public opinion; that the influence of such laws was injurious and demoralizing, leading to a contempt of and disregard for law. As there was also a legal aspect to the question under consideration, he had invited Judge John R. Brady, of the Supreme Court, to be present and to participate in the discussion.

Judge BRADY said that since the act of Parliament, already referred to, was passed, many articles relating to the subject of the regulation of prostitution had been written, and there was one fact noticeable in each case, that the authors had come to no definite conclusion. He was of the impression that the suggestion made by Dr. Sturgis, of restraining all patients suffering from venereal disease within the hospital until the danger of contagion no longer existed, if carried out, would do much towards the protection of the public health in this regard. The judiciary of the country had always been arrayed against the recognition of prostitution in any form. Just here he would take issue with Dr. Sturgis, and say that a woman had not absolute control over her own person; that if it could be shown that she had no other means of making a living she could be arrested as a vagrant and sent to prison. A great difficulty in the way of regulating the evil was met with in the fact that when driven from one street these women would migrate to another. This was particularly true of clandestine women, regarding whom it would be very difficult to enforce any legislative act successfully. Popular prejudice is so strongly arrayed against the recognition of prostitution in any form that he doubted very much whether at the present time our legislators could be induced to interfere in the matter. Whatever should be done he believed must come through the influence of the medical profession. If we desired to accomplish the object in view, namely, the preservation of the public health with reference to prostitution, it was absolutely necessary that we should put our shoulders to the wheel, and ultimately our moral influence might prevail with the community, and lead them to favor such plans as might be suggested in the way of legislation.

The Secretary read a letter from Dr. GIHON, of the United States Navy, regretting his inability to be present at the meeting on account of severe sickness in his family, and also stating it as his belief that whatever good should come in the way of regulating prostitution and preventing the spread of venereal diseases must come through the labors and influence of the medical profession. He believed that when a physician was treating a young man for venereal disease when he was about to become married, and who contrary to advice insisted upon consummating the nuptial tie, he should be privileged in

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the sight of the law to inform the young lady of the danger, and thus prevent the transmission of so serious an affection as syphilis and all its attending consequences.

Dr. L. WEBER said that three methods had been resorted to in dealing with prostitution,—viz., first, to do nothing; second, repression, which had been attempted in Rome, Spain, Bavaria, and elsewhere, which in each instance, however, had been attended by disastrous results; third, the policy of recognition and forcible regulation, which also, as had been proved by statistical evidence, had failed to accomplish the object that its originators and promoters had in view. From a moral point of view the subject could not be broached with any hope of good results. From an intellectual point of view several things might be done with advantage. In the first place, syphilis should be recognized by physicians as a disease like any other disease, and not be looked upon with an air of condemnation, as some were in the habit of looking upon it. Again, it ought perhaps to be treated with a little more energy than many practitioners were in the habit of treating it. Third, he believed it would be well to have greater hospital facilities for the accommodation of syphilitic patients than existed in this city at the present time.

Dr. R. W. TAYLOR thought that the spread of venereal diseases was to be prevented chiefly by properly educating the medical profession itself to their appreciation and to their proper treatment, and in manufacturing sentiment against it. So far as gonorrhœa and chancroid were concerned, legislation could never stamp them out; they were even endemic in polite society.

The discussion was closed by Dr. STURGIS.

NEW YORK COUNTY MEDICAL SOCIETY.

STATED MEETING, MARCH 26, 1883.

Dr. DAVID WEBSTER, President, in the chair.

THE scientific paper of the evening, entitled "*Catarrhal Headaches and Allied Affections*," was read by Dr. R. C. BRANDEIS.

The author opened his remarks by the statement that there was no other class of diseases which offered so many differences with regard to types, conditions, differential diagnosis, and treatment, as did those grouped under the generic name of headache. Headache was met with not only in nervous affections, but in almost every other form of disease, as in fevers, disturbance of the digestive organs, and in divers inflammations of the head and adjacent parts, etc. It was not his intention to enter into the consideration of all the various types of headaches, but to call attention to those which in his opinion were due to the different diseases affecting the nasal and adjacent cavities. If the fact were borne in mind that the nose had to perform a threefold function, we could not but agree that a consideration of the relations which it bore to the system at large was of great importance.

Dr. Brandeis then spoke of the relation of the nose to smelling, breathing, and the voice, and gave a complete and graphic description of its gross anatomy, and the relation existing between its cavities and those of the frontal, sphenoidal, and ethmoidal bones of the skull in so far as it might have a bearing upon the consideration of the affections of which the paper treated.

Acute coryza was the first catarrhal affection to which he would call attention as sometimes being the cause of headache. On ocular inspection, the condition which was found to exist was that of a highly-congested state of the nasal mucous membrane; sometimes it was swollen to such a degree that it produced occlusion of the fossa, and the greater the obstruction which existed the greater was the sense of uneasiness about the forehead. This condition, however, generally lasted only during the first stage. As soon as mucus began to discharge, there was a general amelioration of the symptoms. The explanation of this fact was to be found in the communication existing between the frontal sinuses and the nasal cavity, which, becoming obstructed, did not allow of the escape of the secretions from the mucous membranes lining the two from taking place so long as such a condition of swelling and occlusion existed. In order to show the connection between acute coryza and frontal pain, a case was narrated in which, after an injection had been used, relieving the congestion and fulness in the nasal cavity, due to swelling of the mucous membrane, the tenderness over the forehead, the sense of constriction, and other symptoms entirely disappeared.

Chronic catarrhal rhinitis, when accompanied with hypertrophy of the mucous membrane, was also accompanied with more or less pain in the frontal region. He had known several cases of severe persistent headache, which had had all the changes of treatment rung upon them, and which only disappeared when the nasal cavity, the seat of chronic catarrh, had been restored to its normal condition. There could have been no doubt in these cases that the neuralgia and obstructed condition of the nasal fossa stood in the relation of cause and effect.

It had not only been demonstrated that the lymphatics of the nasal mucous membrane could be injected from the supra-orbital and the subarachnoidal spaces, but that, if sufficient force were used, fluid could be made to pass through the lymphatic canals to the surface of the mucous membrane. We thus saw that there must be a direct communication between the nasal and the cerebro-spinal cavities; and it was therefore just to assume that if these passages became obstructed

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there might ensue pressure on the cerebro-spinal fluid. To this class the following case probably belonged: the patient had been suffering from continued headache, referable to the base of the brain and to the occiput, for some time. He was greatly emaciated,—suffered from insomnia, loss of appetite, and difficulty of respiration. He had been under the care of Dr. Jewel, of Chicago, who finally referred him to a head specialist. He came to New York; and Dr. Brandeis, on examining him, found that the posterior nasal space on both sides was filled with polypi. In the course of several weeks he removed a sufficient number of polypi to fill an ounce vial. The headache disappeared, the appetite returned, and he was able to sleep without the aid of narcotics.

Of all the cavities communicating with the nose, that of the antrum of Highmore was most liable to become the seat of inflammation and to give rise to the nervous symptoms under consideration. The cavity was of such size, and the foramen communicating with the nasal cavity was situated so far above its most dependent portion, that during inflammation, when the secretions were poured out faster than they could be absorbed, a considerable accumulation took place, and the patient suffered great pain in and about the upper jaw, not only from the inflammatory process, but also from the column of fluid contained in the cavity and superimposed upon the dental nerve. The teeth might become carious, owing to impaired nutrition therefrom. In many cases it became necessary to perforate the antrum, in order to procure a discharge of the contents and allow of topical applications. A mode of procedure readily employed was to extract the second upper molar tooth on the affected side, and then perforate the alveolus, so that direct communication between the cavity and the external air might be established. It had also been suggested to perforate from within the nasal cavity.

DISCUSSION.

Dr. KNAPP remarked that there were two conditions of the frontal sinuses in which headache might be a prominent symptom,—namely, acute catarrhal affections and chronic affections. In illustration of the first, we all knew that in employing the posterior nares syringe, if the patient bent the head forward and the liquid ran into the frontal sinuses, intense headache for a few hours or days was the consequence. Of the other condition he remembered one case, which was very striking. It was that of a lady who had suffered for years from intense headache, and there was no particular cause to attribute it to. After a time he was called upon to open an abscess which had formed at the outer part of the roof of the orbit. He thought it was nothing but a periosteal abscess, and opened it, and for about a week the patient felt relief. She then exposed herself, and afterwards had very severe cerebral symptoms; and Dr. Seguin, who saw the patient later, diagnosed abscess in the frontal lobes of the brain. She died two or three days afterwards, and it was found that there was pus in the frontal sinuses, and in the superior plate of the bone there was a small perforation, and the abscess which had formed had evidently been there for years without producing any other symptoms. He had seen the frontal sinuses full of sero-purulent liquids, of polyps, and of sarcomatous growths for years.

After the election of three members to fill vacancies to the State Medical Society, the following resolutions with regard to the death of George M. Beard, M.D., were offered by Dr. Rockwell and adopted by the Society:

"*Resolved*, That in the death of Dr. George M. Beard this Society and the profession at large have lost one of their most brilliant, active, and earnest members. As an investigator, he was original and conscientious. As a friend, he was generous and steadfast. Exposed by his restless activity to many and peculiar attacks, he ever manifested the utmost charity and good humor. Of his worst enemies he seldom spoke a harsh, and never a vindictive, word.

"*Resolved*, That to his child, orphaned in one short week by the added affliction of a mother's death, to his mother, brothers, and sister, we tender our heartfelt sympathy.

"*Resolved*, That these resolutions be published in the medical journals of this city."

Dr. ROCKWELL.—In presenting these resolutions, Mr. President, I would simply add that, having been associated for many years with Dr. Beard in a peculiarly close intimacy, it was my fortune to know him perhaps better than most others. His self-poise was remarkable. As a foil, so to speak, to the many attacks that followed his original investigations and his positive and independent methods of expression, he seemed almost to live and move and have his being in humor.

His powers were of the most versatile character. His readiness and originality as a scientific writer are well known; but it is not so well understood that he had a genius for an entirely different sort of literary work. While a very young man, serving during the late war in the Gulf Squadron, and merely to give vent to his ever-restless mind, he penned a work of fiction, which gave evidence of no mean talent in that direction; and since his death an autobiographical sketch has come to light, which, for its quaint humor, its keen estimate of character, and its philosophic insight, is unsurpassed.

I could say much in regard to this individuality, through which ran so rich a vein, and which in many respects was as unique and remarkable as any I have ever known or read of; but I forbear, and content myself with the

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brief but just tribute embodied in the resolutions.

Dr. ROOSA.—Mr. President, before these resolutions are put, I would like to say a few words in memory of my departed friend. It was my privilege to know Dr. Beard at the time when he and I entered the profession, and it continued to be my privilege to know him up to his death. I think all of us must have been during the last winter particularly admonished of the frailty of the existence of even the strongest of us. When we think over the names of Draper, and White, and De Luna, and Beard,—all men in the prime of life who have passed away, I think we must say that the battle is not to the strongest, nor is the victory to the swiftest. Dr. Beard possessed qualities which a physical infirmity did not allow of complete illustration. That physical infirmity in one instance, at least, had an untoward effect in prejudicing a large number of our transatlantic brethren against him. In an announcement that he made a certain experiment and laid his paper before the New York Academy of Medicine,—a claim which he never made,—he was unable, in consequence of that physical infirmity, deafness, to appreciate the statement, and therefore did not have the opportunity to show that he had no intention of claiming any such thing. That statement was made one of the groundworks of a charge against him, and those of us who knew him best, whatever we may have thought of his scientific opinions, know that it was utterly mistaken. So in many other instances Dr. Beard was unable to enter fully into debates which his views originated, and therefore he was very much impaired by this defect. I simply allude to it that, in doing justice to his noble character, we all know that in no instance did he ever depart from that which he believed to be entirely and completely true. He was a man, as has been said by the gentleman with whom he was so intimately associated for years, extremely tolerant of the opinions of others. He was a man who never retaliated upon those who seemed to make personal matters that he regarded as merely differences of opinion on scientific or other subjects. He was a man far ahead of his age in many respects; and I believe that future generations will do more justice to some of Dr. Beard's statements than has been done to them at the present time. I have more charity, perhaps, than some with reference to his views regarding the mental condition of the man who assassinated the President. I believe that his views regarding the mental power of man after the age of forty years will be more and more accepted, and also his views with regard to responsibility at certain periods in life will be more and more respected. I think that his view, that the golden period in man's life, however much we may smile upon him now, is the middle period of life, will finally be accepted in all quarters of the world. I had the pleasure of being associated with him in making experiments with regard to the lesions which give rise to deaf-mutism. This was early in his career, and these observations, and other of his observations, I believe, have taken a place in the literature of a certain department of medicine.

Dr. Roosa then spoke of his great work on electricity, written in association with Dr. Rockwell, a recognized standard text-book upon that subject in all countries in the world. He also referred to the remarkable fact that at one time Dr. Beard wished to read Tobold's writings in the original, and to accomplish this he began the study of German, and so perfected his acquaintance with the language that in six weeks he was not only able to read the book, but to present an acceptable translation to the medical profession.

Dr. W. M. CARPENTER.—Mr. President, it was about the year 1873 that I made Dr. Beard's acquaintance, and that acquaintance, as it gradually increased, matured and ripened into a friendship which was both true and faithful. I had not heard of his sickness, and when the startling announcement of his death fell upon my ears I felt that I had lost a brother, and it is to the memory of that departed brother that I wish this evening to pay my humble respects. It has justly been said, Mr. President, that Dr. Beard possessed an active mind. Indeed, it may have been said of him that he was enthusiastic, if in the interpretation of that word we mean devoted to the study of whatever subject he had under consideration. But I believe that his work meant more than this. I think I can see, as I trace his work from year to year, how he gradually stepped out of routine course, how he finally was seen engaging with those problems which gather along the border between the unseen and the seen, between the knowable and the unknowable. It was in that field that his spirit found the greatest freedom. But in whatever department he worked, he, I believe, wrought well; for he made for himself a worthy fame, carved an enduring name, and has won a niche in the scientific temple of the last half of the nineteenth century. He indeed was enthusiastic, but he was not precipitate. He was bold in the expression of his opinions, but he was not bigoted. It has been said that he was erratic and visionary. The same, however, was said of men who lived before our generation, and who to-day are accredited with having belonged to the brightest intellects of their times. In this great human caravan which keeps pace to the march of time, as I conceive, there are three classes of workers: first, and by far the largest number, those who merely float, and follow in routine courses or walk in circles; second, those who desire and strive to make this routine course and these circles a little more easy and a little straighter by chipping off a little here and filling a little there, lessen-

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ing the grade at this point and increasing momentum at that point; and, third, representing and embracing only a small fraction of this great multitude, those who are the advance workers, those who do what we sometimes call original work; and I believe it was in this field that Dr. Beard was laboring when the summons came. Therefore it was that any man who came in contact with him and had the pleasure of his conversation could always carry away something that would furnish food for thought. He worked because he loved to work, not as a slave, but as a child filled with filial devotion; and I can readily see the point and the aim of the mental organization when in the very hour of his dissolution he expressed the hope that some one would take up his work at the point he left it, and carry it forward, and he breathed the hope that he might be permitted, as a contribution to his work, to record the thoughts of a dying man.

But his labor has ceased. In the prime of his life, in the midst of greatest activity, in the mid-day of his gathering usefulness, his sun went down. But may we not see on the blue arch a golden radiance which marks the place where it sank beneath the horizon?

GLEANINGS FROM EXCHANGES.

THE TREATMENT OF EPILEPSY.—The *Practitioner* for February, 1883, contains three articles upon the therapeutics of epilepsy that embody much that is valuable and suggestive. Dr. James Russell considers the remedies used in the treatment of this disease before the introduction of the bromides; but the results reported are far from satisfactory,—whether from iron, zinc, arsenic, strychnia, opium, cannabis Indica, belladonna, spinal ice-bag, blisters, seton, or static electricity, the verdict was almost the same, sometimes temporary improvement, usually ultimate failure.

Dr. Radcliffe continues his medical annotations concerning epilepsy, and discusses especially its treatment. Potassium bromide was introduced by Sir Charles Locock for cases of epilepsy in young women in which erotic excitability seemed to be the prominent element in the etiology. Dr. Radford subsequently extended the use of the remedy to all cases of epilepsy. Of the alkaline bromides, sodium, potassium, and ammonium, he most frequently gives the last named, as being less likely to cause eruptions upon the skin, or to stultify the patient. It also contains a larger proportion of bromine than the others. He usually gives from forty-five to sixty grains in the course of the day. His experience shows that the remedy may be continued in these doses for a long time without injuriously affecting the mind or bodily functions. With regard to large doses, he says that he has not found it necessary to go beyond one drachm a day; and with reference to the selection of appropriate cases, he remarks, "What I have always found is, that the bromide does not act kindly in cases where the memory is bad and the mental power generally enfeebled,—the mischief done, as a rule, showing itself chiefly in stultification and in disfigurement of the skin by rashes of various sorts, without any very certain change for the better on the attacks. I have indeed found that the attacks were less likely to be kept in check if the bromide was pushed to the extent of causing any stultification or much cutaneous disfigurement, and that it was never advisable to go so far as to produce 'bromidism,' which, to my mind, is an evil which is scarcely less ghastly than epilepsy itself. I am quite satisfied that harm rather than good is done by giving large doses of bromide of potassium or bromide of ammonium in ordinary cases of epilepsy where the memory is bad and the mental power generally enfeebled, and that forty-five grains in the course of the day is too large a dose; rather give too small a dose for an adult in such a case. In a word, the conclusion at which I have arrived is that in any case the bromide has been pushed too far if it gives rise to any marked symptoms of 'bromidism,' that in cases of *le haut mal* with much mental enfeeblement this medicine is very likely to be hurtful even when only given in moderate doses, and that in the majority of cases of *le petit mal* the good to be done by it is barely appreciable."

He found great advantage in combining with the bromine salt iodide of potassium, bicarbonate of potassium, and especially chloride of ammonium. Iron is pronounced to be absolutely injurious to epileptics; arsenic, however, is often serviceable. Hypophosphite of sodium he praises particularly for its influence upon nerve-structures, and states that he does "not hesitate to say that the bromide often seems to be almost doubled in remedial value when it is given along with the hypophosphite, or that thirty grains of the bromide, along with thirty grains of the hypophosphite, given in one or two doses in the course of the twenty-four hours, will go as far in controlling the attacks as forty-five grains of the bromide given by itself. And this is no small gain, for by diminishing the dose of the bromide the risk of stultifying and disfiguring the patient is to that degree diminished." He considers it a mistake to be too ready to associate tonics and restoratives with the bromides in the treatment of epilepsy. The restorative he prefers is a dessertspoonful of brandy, rum, or whiskey given in the dose of medicine, or else a capsule containing a drop of œnanthic ether after it.

Dr. Radcliffe further insists upon the necessity of proper hygienic treatment, the reduc-

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tion in nitrogenized food, such as meat and milk, and recommends a greater proportion of fatty or oily matter. Buttermilk or sour milk may be drunk freely, but not fresh milk. As regards sleep, the epileptic should not be allowed too much sleep, as it increases the tendency to convulsions. The mind should not lie idle, and systematic education of both mental and physical powers is absolutely of paramount importance.

Dr. Saundby, in a short article on the "Treatment of Epilepsy," read before the Midland Medical Society, claims that success in the treatment of this affection depends, first of all, upon accuracy in diagnosis; and he draws the distinction very clearly between symptomatic and true epilepsy.

The most powerful and efficient remedies are the bromide salts; he prefers the potassium bromide, ten grains three times a day, which in many cases he has found sufficient. He invariably adds tincture of digitalis (℥x) to counteract any depressing effect. Attention to the diet, the use of occasional laxatives, and, as a rule, abstinence from alcohol are enjoined. If the remedy should fail to control the convulsions, the dose is to be increased, first by ten grains more of potassium bromide, then by ten of sodium bromide, and finally by ten of ammonium bromide. Oxide of zinc (gr. iij–v), with extract of cannabis Indica (gr. ⅛), is also added to each dose of the mixture when the bromides seem to be failing. The use of iron, especially its routine administration, is pronounced very undesirable, and he states that he has seen cases made worse by iron. Cases that are rebellious to the above treatment are sometimes greatly benefited by borax, as recommended by Dr. Gowers, either combined with arsenic or with oxide of zinc.

The attacks of *petit mal* and epileptic vertigo, according to Dr. Saundby, are greatly relieved by the use of caffeine and theine. It is in such cases that the bromides are useless. Nitro-glycerine was also used in two cases, with complete success in stopping the giddiness. Dr. Radcliffe also speaks favorably of coffee and chocolate in the dietary of epileptics, but does not approve of tea.

NEPHROTOMY FOR HYDRONEPHROSIS, WITH RECOVERY.—For the relief of large renal cysts three methods of treatment have been advocated,—aspiration, nephrectomy, and antiseptic incision and drainage or nephrotomy. Dr. A. T. Cabot reported a case of a boy ten years of age, who, having sustained a fall three months before, was brought to the Children's Hospital, Boston, evidently suffering with renal cyst. The right side of the abdomen to the median line was prominent, fluctuating, and dull on percussion, the dulness being continuous with that of the liver and kidney and reaching downward to within an inch of the anterior superior spine of the ilium. By aspiration a fluid was obtained in quantity amounting to forty-four ounces, which contained albumen and blood-cells; a second aspiration, nine days later, obtained a much smaller quantity, which was found to contain urea in small amount. Ten days later, Dr. Cabot made an incision vertically upwards from the crest of the ilium along the outer edge of the quadratus lumborum. A cyst was discovered, which was incised and stitched to the skin, between two and three pints of amber-colored fluid escaping, which was found to contain urea, uric acid, indican, chlorine, and albumen, specific gravity 1008, reaction slightly acid. A double drainage-tube was introduced and a Lister dressing applied. Five and a half weeks after operation the tube was withdrawn, and the wound quickly closed. He completely recovered. In the course of the treatment there were evidences of carbolic acid absorption; the urine became smoky, and at the same time the discharge from the wound was of the same color, showing that the kidney still retained secreting structure; and the subsequent closure of the wound indicated that the ureter had again become pervious.

In commenting upon this case, the reporter states that the fact of a hydronephrosis having had a traumatic origin should encourage the hope that by simply emptying the cyst a cure may be accomplished; and he recommends aspirations, repeated until they are followed by fever, or the cyst rapidly refills, or the patient is seen to be losing ground: in these circumstances antiseptic incision is called for. The objection to nephrotomy is that it may remove a kidney containing structure which may be restored to usefulness, as in the case reported.—*Boston Med. and Surg. Journal.*

THE TUBERCLE BACILLUS IN THE URINE.—The first recorded observation of the tubercle bacillus in the urine of a living man has just been announced by Professor Rosenstein, of Leyden, in the *Centralblatt* for February 3. The bacillus had indeed already been discovered in the products of the pelvis of the kidney, but the observation was made post mortem, and was therefore of comparatively less value than the detection of the organism in urine freshly passed. The case in point was that of a man aged 37 years, with scrofulous disease of both testes, and abundant albuminuria, the urine being muddy and presenting a few flocculi, as large as the head of a pin, floating through it. On standing, it deposited a considerable sediment, which consisted chiefly of pus with a few red corpuscles. For the purpose of careful examination, the urine was passed into a solution of thymol and allowed to stand for twenty-four hours. The fluid portion was then removed, and a drop of the sediment was treated like sputum which is being examined for bacilli according to Ehrlich's method. With a high power of the microscope it was

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discovered that abundant masses of the tubercle bacillus were present in the flocculi just described. Professor Rosenstein recommends the use of methyl blue in the process of preparation, to prevent confusion of the tubercle bacillus with other organisms present even in fresh urine.—*Med. Times and Gazette.*

DIGITAL EXPLORATION OF THE BLADDER—REMOVAL OF VESICAL GROWTHS.—A remarkable communication by Sir Henry Thompson appears in the *Lancet* (February 10), in which the distinguished surgeon reports fourteen cases of digital exploration of the bladder for obscure vesical symptoms, out of which the large number of six occurred, in which vesical tumor was detected and successfully removed, with striking relief to the symptoms. Thirteen of these cases were male, the other being one of a vesical growth in which dilatation of the urethra was practised and the tumor removed, this being added as being analogous to the proceeding adopted in the male. The method pursued in the latter was by a limited incision of the perineum carried to the membranous urethra only; the index-finger then being introduced into the bladder, and with the aid of supra-pubic pressure with the other hand, the entire mucous surface of the viscus can be explored. Although this incision has been frequently practised for stricture, retention, etc., this application of it for diagnostic purposes is new. Many of the cases in which polypoid excrescences were found had been previously treated for stone in the bladder by lithotrity. In other cases, when no stone, encysted or diffuse, in the form of a calcareous deposit upon the bladder-wall, can be found, the performance of external urethrotomy and the retention of the tube for a few days greatly relieve the symptoms, and the improvement is sometimes permanent.

ACUTE MANIA TREATED BY HYOSCYAMINE.—Thomas Browne, M.D., of the Royal Naval Hospital at Great Yarmouth, reports (*British Medical Journal*, November 25) that in Merck's crystalline hyoscyamine we have an agent often capable of controlling the violence of a furious maniac and soothing him to sleep. It is also of great service in noisy and destructive general paralytics. It is best given in solution (hyoscyamine, gr. iv; glycerin, distilled water, of each ℥ss; carbolic acid, ♏ij; dissolve without heat). Dose, from four to eight minims given hypodermically. No curative action is claimed for the drug.

A CASE OF SUPPOSED PHTHISICAL INFECTION.—Dr. Quinlan reports a case of phthisis in the *British Medical Journal* (February 10), in which apparently the only source to which the disease could be traced was association with a consumptive husband. The patient was 37 years of age; she had been married since 1878, previous health had been good, and with an excellent family history. The patient's husband, after long-continued ill health, presented symptoms of rapid consumption in the latter part of 1880, and died in April, 1881. Two months before his death, his wife, who lived with him in one room, commenced to cough and began to emaciate and have night-sweats. On coming under observation, a short time since, she was found to be suffering with consolidation of the left apex, with moist crepitus both on inspiration and on expiration. The sputum contained bacilli. The breath will shortly be examined by the method mentioned in the last issue of this journal. Two children had been born during the husband's lifetime: one died of water on the brain, the other of convulsions.

EQUITATION AS PREVENTIVE AND CURE OF HEMORRHOIDS.—In the *New York Medical Record*, Dr. William Bodenhamer writes favorably of horseback exercise as a potent preventive and treatment for hemorrhoids, especially internal. He also refers to a gymnastic exercise practised in Bethune Hospital with success in this affection. "It consists simply in trying to touch the toes with the fingers without bending the knees. This movement, though difficult at first, soon becomes easy: it not only strengthens and develops the muscles of the abdomen, but also those of the legs and thighs."

PLANTAIN AS A STYPTIC.—An old styptic, mentioned by Shakspeare and recommended by various writers, from Pliny to Culpepper, plantain, has been almost entirely overlooked by modern writers upon therapeutics. Prof. Quinlan, of Dublin, found it in use as a popular remedy in a remote district in Ireland, and has tried it extensively with the best results in cases of external hemorrhage suited to the use of styptics. In cases of internal bleeding from the lungs, the kidneys, the bowels, and in menorrhagia, he has got fair results from large and repeated doses of the juice, either fresh or fortified with alcohol or glycerin.—*Lancet*, No. xxi.

HUMAN BLOOD-PRESSURE CURVES.—At the meeting of the Berlin Royal Society of Physicians on February 16, Professor Albert demonstrated some blood-pressure curves obtained from men. They had been obtained from individuals about to undergo amputation of the leg. Previous to the commencement of the operation, the tibialis anticus was laid bare, and the canula inserted for about a minute. It was shown that the blood-pressure immediately rose on raising up the individual (previously anæsthetized),—a contrary result to that obtained in Marey's experiments on animals.

PICRIC ACID IN ERYSIPELAS.—Dr. Flaminio Tassi, of Siena, has used a saturated solution of picric acid in the treatment of four cases of erysipelas. It was painted on with a brush

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over the inflamed part. It appears to have a beneficial action, but the number of cases is too small to enable any definite opinion as to its therapeutical value to be formed as yet. (*L'acido picrico nella cura dell' erisipela* (pamphlet), Torino, 1881.)—*Practitioner.*

MISCELLANY.

THE PHILADELPHIA POLYCLINIC is now opened, with a full attendance of patients. The lectures will commence, for the spring session, on April 16, 1883. The fee for each course of instruction upon one subject is twenty dollars for six weeks. The teaching staff is as follows:

Richard J. Levis, M.D., *Operative and Clinical Surgery;* Thomas G. Morton, M.D., *General and Orthopædic Surgery;* J. Solis-Cohen, M.D., *Diseases of the Throat and Nose;* James C. Wilson, M.D., *Diseases of the Chest;* John B. Roberts, M.D., *Applied Anatomy and Practical Surgery;* Charles H. Burnett, M.D., *Diseases of the Ear;* Charles K. Mills, M.D., *Diseases of the Mind and Nervous System;* Henry Leffmann, M.D., *Clinical Chemistry and Hygiene;* Arthur Van Harlingen, M.D., *Diseases of the Skin;* Edward L. Duer, M.D., *Diseases Peculiar to Women and Children;* George C. Harlan, M.D., *Diseases of the Eye;* J. Henry C. Simes, M.D., *Genito-Urinary and Venereal Diseases;* Frederick P. Henry, M.D., *Pathology and Microscopy.*

THE Board of Trustees of the Jefferson Medical College, at the meeting March 31, elected Dr. J. M. Barton Attending Surgeon, and Drs. Jos. Neff and J. T. Eskridge Attending Physicians to the Hospital.

THE JEFFERSON COLLEGE COMMENCEMENT was held April 2, at which 227 students were graduated. Prof. Da Costa delivered the valedictory address. A marble bust of the late Prof. Joseph Pancoast was presented to the Board of Trustees by the Alumni Association, this valuable gift having been made by Prof. William H. Pancoast to the Association.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY FROM MARCH 17 TO MARCH 31, 1883.

MURRAY, ROBERT, COLONEL AND ASSISTANT SURGEON-GENERAL.—Detailed as member of Army Retiring Board, to convene at the call of the President thereof at Governor's Island, New York Harbor, for the examination of such officers as may be ordered before it. Paragraph 2, S. O. 62, A. G. O., March 16, 1883.

SUMMERS, JOHN E., LIEUTENANT-COLONEL AND SURGEON.—Detailed as member of Army Retiring Board, to convene at the call of the President thereof at Omaha, Nebraska, for the examination of such officers as may be ordered before it. Paragraph 9, S. O. 62, A. G. O., March 16, 1883.

BILL, JOSEPH H., MAJOR AND SURGEON.—Detailed as member of Army Retiring Board, to convene at the call of the President thereof at Omaha, Nebraska, for the examination of such officers as may be ordered before it. Paragraph 9, S. O. 62, A. G. O., March 16, 1883.

IRWIN, B. J. D., MAJOR AND SURGEON.—Detailed as member of General Court-Martial, to meet at Whipple Barracks, Prescott, Arizona Territory, April 23, 1883, for trial of Captain J. P. Walker, Third Cavalry. Paragraph 1, S. O. 62, A. G. O., March 6, 1883.

JANEWAY, JOHN H., MAJOR AND SURGEON.—Detailed as member of Army Retiring Board, to convene at Governor's Island, New York Harbor, at the call of the President thereof, for the examination of such officers as may be ordered before it. Paragraph 2, S. O. 62, A. G. O., March 16, 1883.

BARNETT, RICHARDS, CAPTAIN AND ASSISTANT-SURGEON.—To proceed to Fort Adams, Rhode Island, and report to the commanding officer for duty at that post. Paragraph 1, S. O. 51, Department of the East, March 28, 1883.

CRONKHITE, HENRY M., CAPTAIN AND ASSISTANT-SURGEON.—Relieved from duty at Fort McKinney, Wyoming Territory, and assigned to duty as post-surgeon at Fort Fred. Steele, Wyoming Territory. S. O. 31, Department of the Platte, March 22, 1883.

BURTON, HENRY G., CAPTAIN AND ASSISTANT-SURGEON.—To be relieved from duty in the Department of the East, and will report in person to the commanding general, Department of Dakota, for assignment to duty. Paragraph 1, S. O. 67, A. G. O., March 22, 1883.

DE LOFFRE, AUGUSTUS A., CAPTAIN AND ASSISTANT-SURGEON.—Granted leave of absence for three months. Paragraph 3, S. O. 71, A. G. O., March 27, 1883.

GIRARD, JOSEPH B., CAPTAIN AND ASSISTANT-SURGEON.—Detailed as member of General Court-Martial, to meet at Whipple Barracks, Prescott, Arizona Territory, April 23, 1883, for trial of Captain J. P. Walker, Third Cavalry. Paragraph 1, S. O. 62, A. G. O., March 16, 1883.

LORING, L. Y., CAPTAIN AND ASSISTANT-SURGEON.—To proceed without delay to Fort Schuyler, New York Harbor, and report to the commanding officer for duty as post-surgeon. Paragraph 2, S. O. 51, Department of the East, March 28, 1883.

MOSELEY, EDWARD B., CAPTAIN AND ASSISTANT-SURGEON.—To report in person to the President of the Army Medical Examining Board in New York City, for examination for promotion, and upon completion to return to proper station. Paragraph 3, S. O. 70, A. G. O., March 26, 1883.

PAULDING, H. O., CAPTAIN AND ASSISTANT-SURGEON.—Relieved from duty at Fort Laramie, Wyoming Territory, and assigned to duty at Fort Sidney, Nebraska. S. O. 31, Department of the Platte, March 22, 1883.

PORTER, JOSEPH Y., CAPTAIN AND ASSISTANT-SURGEON.—To be relieved from duty in the Department of the South, and will report in person to the commanding general, Department of Texas, for assignment to duty. Paragraph 1, S. O. 67, A. G. O., March 22, 1883.

SKINNER, JOHN O., CAPTAIN AND ASSISTANT-SURGEON.—To report in person to the President of the Army Medical Examining Board in New York City, for examination for promotion, and upon completion to return to proper station. Paragraph 3, S. O. 70, A. G. O., March 26, 1883.

TAYLOR, MARCUS E., CAPTAIN AND ASSISTANT-SURGEON.—To report in person to the President of the Army Medical Examining Board in New York City, for examination for promotion, and upon completion to return to proper station. Paragraph 3, S. O. 70, A. G. O., March 26, 1883.

TURRILL, HENRY S., CAPTAIN AND ASSISTANT-SURGEON.—Relieved from duty at Fort Fred. Steele, Wyoming Territory, and assigned to duty as post-surgeon at Fort McKinney, Wyoming Territory. S. O. 31, Department of the Platte, March 22, 1883.

WINNE, CHARLES K., CAPTAIN AND ASSISTANT-SURGEON.—Granted leave of absence for three months from March 31, 1883, and will be relieved from duty in the Department of the East, and upon the expiration of his leave of absence will report in person to the commanding general, Department of California, for assignment to duty. S. O. 61, A. G. O., March 15, 1883.

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PHILADELPHIA MEDICAL TIMES.

PHILADELPHIA, APRIL 21, 1883.

ORIGINAL COMMUNICATIONS.

MEDICAL CHARITIES.

Read before the Philadelphia County Medical Society, March 14, 1883,

BY JAMES W. WALK, A.M., M.D.

GENTLEMEN,—When I was requested to present to the Society to-night my views upon some professional subject, I hesitated before accepting the invitation, for I had nothing strikingly new, either in pathology or in therapeutics, to bring before you,—nothing, perhaps, which would be worthy the attention of this body. Indeed, I should not presume to occupy the time of the Society at all, were it not that I have been informed that it is the wish of a number of members to give an evening to the discussion of those public relations of the medical profession which, if less interesting to the scientific inquirer, are sufficiently important to every practising physician.

It is in the hope of eliciting such a discussion that I have prepared some notes upon the Medical Charities of Philadelphia.

Words in the commonest usage are often hardest to define. *Charity* is used in several different senses. Medical charities, as I employ the term, include all those relations between medical men and the laity which are characterized by the giving of professional service without a corresponding pecuniary compensation.

In Philadelphia, medical charities exist in three forms:

1. The unpaid work done by physicians in their private practice;
2. Hospitals;
3. Dispensaries.

Of the first I have little to say. Ever since medicine took its place among the liberal professions, the unselfish interest felt by the physician in those of his patients whom misfortune had reduced to penury has been a noble and a distinguishing mark of his calling. His patients are his friends, and his kindly ministrations to them in times of misfortune are given in the spirit of benevolence and received with gratitude. Liable to abuse even this may be, but it is founded upon the mutual esteem of physician and patient, and its good greatly outweighs its evil.

The second variety of medical charities is the hospitals.

Of these we have in Philadelphia twenty-one, exclusive of the Municipal Hospital for contagious diseases. Their total available capacity is 2412.

By a recent enumeration it was shown that there were in these institutions 1814 patients, and of these 1573 were on the *free list.* Taking twenty-nine days as the average residence of a patient in a hospital (this is the time given in the Report of the Pennsylvania Hospital), we fix the entire number of persons receiving free hospital treatment during a single year at 19,798, which is nearly two and one-half per cent. of our entire population. How many of these are "hospital bummers,"—how many are able to pay for their treatment but impose upon the institutions that furnish it without cost,—I do not undertake to say. The abuse of hospitals is not so great here as in some other cities; and it has always this mitigation, that the patients furnish the material for clinical teaching in our great schools of medicine and also to nearly fifty recent graduates who have secured residencies in the different institutions.

The expense attendant upon hospitals is so large that up to this time it has prevented their undue multiplication; and I pass from them to the discussion of the *third* form of medical charity,—a cheap, ill-considered, pernicious charity,—the existing dispensary system of this city.

With the purpose of procuring some reliable statistics concerning the operations of the dispensaries, I have inquired into the condition of thirty-two of these institutions,—not all that exist in this city, but the majority. My examination has included annual reports whenever procurable, newspaper summaries, and other sources of information, the figures being in nearly every instance those published by the dispensaries themselves.

From this investigation I learn that in the thirty-two institutions referred to there are treated in one year 161,019 cases. If each of these cases represents an individual,—and in some of the reports it is so stated,—we are brought face to face with the astonishing fact that twenty per cent. of our entire population—one-fifth of our whole people—receive free medical attendance. I do not believe our condition is as

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bad as this. Some deductions should be made from this total, though these deductions will be nearly balanced by the returns from unenumerated institutions; but, making due allowance for these, the fact remains that about one hundred and fifty thousand persons receive free medical treatment in the city of Philadelphia during one year!

What good has resulted? If there has been a benefit, it must have been either to (1) the physicians or to (2) the patients.

Let us look at the *good* physicians derive from this system. The impression is common among the people that the advantage is great. Let no medical man indulge the amiable fancy that the patients he treats in the dispensary suppose that he is doing a noble and philanthropic act and putting them under a correspondingly great obligation. In their view, the accommodation is the other way. Their opinion was not inaptly expressed by the Irishman who said, "Faith, I've been to the dispensary and let the doctor try his hand on me, and it's rare he has a whack at so fine a man as myself; and sure it's grateful he might be for the like of such experience."

The free doctor may *possibly* enjoy a sentimental satisfaction in his work, but if he expects gratitude he is likely to die in expectation. Ah! but there are other advantages. Are there? 1st. There is the valuable clinical experience. Certainly it is true that a man *may* so use his dispensary practice as to derive from it valuable experience; but that is not the question. As our dispensaries are at present conducted, *does* the physician gain much valuable experience?

In the large institutions, often as many as fifty patients are to be treated in the space of two hours, by two or three physicians. What chance is there for careful work?—what opportunity for that close judicial study of symptoms, that careful collation of facts, that minute attention to subordinate but important details, which transform the tyro into the expert? A few cases studied in all their bearings are certainly better than a large number slighted. To a layman the survey of a group of patients may convey no information, except that they are all sick. Among the same group a careless practitioner will recognize some marked differences in conditions, which will afford the basis for a rough classification; but to the painstaking scientist, aided by the thousand facts ascertainable only upon close scrutiny, this group will resolve itself into distinct and well-defined classes. Now, is such scrutiny practised in the dispensaries? The motley crowd is gathered in the waiting-room. What do you know of the antecedents of each individual?—what of the condition under which he lives in the interval between his weekly or semi-weekly visits? I am not without the sanction of high authority when I assert that the time and labor expended upon a cursory examination of a large number of cases would yield much greater profit if devoted to the conscientious and exhaustive study of a few. There is another advantage claimed for this system. It is thought that in this way a physician may gain a reputation. The new graduate is ambitious to make the world conscious of his prowess, and the dispensary is the tournament where he can display it. I am afraid that he is doomed to disappointment. You will not get much glory. You are more likely to be dubbed the "cheap doctor," or the "free doctor," or, bad as it will sound, the "poor doctor," which is an unpleasantly suggestive phrase. This world judges services by their money value, and what costs nothing is too cheap to be appreciated. Let me narrate an incident. It occurred in—well, say one of the cities in the flooded districts out West. There was a charitable establishment, in which the patients were mostly children, and there were two young doctors, very good doctors, who went early and late to attend the sick therein. Of course their services were entirely gratuitous. I know not what pleasing anticipations they indulged of consequent professional renown and a lucrative practice among the wealthy people who patronized the establishment; but this is what happened.

A little patient had a diseased toe, which contumaciously resisted all manner of ointments and washings and plasterings. There was, without doubt, necrosis of the bone, and the toe was, and would continue to be, unequivocally good for nothing.

The two young doctors, after an adequate amount of consultation, amputated the toe. Doubtless, you say, they thereby gained the thanks of the directors, in addition to a specimen for preservation in alcohol. By no means: quite the contrary. There was great indignation. What business had the young doctors to cut off a toe without the consent of the directors? It

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was gross presumption. A consultation was called, not by the physicians, but by the authorities; and the great leaders of the profession were summoned to decide in solemn conclave whether that particular part of the human form divine, unfortunate and necrosed though it may have been, should have been thus rudely severed from the parent trunk. Is there any other profession whose members would submit to such treatment?

The second question relates to the benefit of the patients. How much benefit do they derive from the dispensaries? Certainly all they have a right to expect free of cost; but the benefit is greatly overestimated. The same crowding which makes these institutions of little value to the practitioner diminishes their value to the patient. The advantage to health is small enough; but what is the effect upon character?

We cannot avoid responsibility for the moral results of any system which we support; and the physical benefits conferred by the dispensaries must indeed be great to offset their deplorable effects upon the multitude herding in crowds for the pauper's portion of science or empiricism. No one agency (except the municipal outdoor poor-law relief, now happily abolished) has tended more directly to pauperize this community.

I need not enlarge upon this. No one will deny that the free provision of what ought to be paid for constantly operates to make people improvident,—to imbue them with the notion that, however careless and shiftless and criminal they may be, the dispensary doctor and free medicine are always sure. The contagion of syphilis must be paid for, but the cure of syphilis is as free as air.

And who can estimate the degradation which this system has brought upon the medical profession? It has taught the public that the toils which we undergo and the risks we take are a matter of course,—worth nothing. Contrast our position for one moment with that of the lawyers. Who gets legal advice without paying for it? Precious few. Young lawyers also want experience and practice and reputation as much as we do; but they have been wise enough to avoid the pit into which we have fallen.

Some time ago, the New Century Club established a bureau for the legal protection of working-women. No counsel-fees were charged; but, mark! the class to be benefited was that which most justly excites our interest and sympathy,—the overworked and underpaid sewing-girls. Even domestic servants were excluded, and the entire scheme was carefully hedged with safeguards which insured that its benefits should accrue only to those who were deserving of aid and who on account of real poverty could not procure legal advice unless it was free.

The Philadelphia lawyer will not countenance any legal charity for those able to pay an attorney's fee; and he is right.

Do not let us grow sentimental and gush about our unlimited philanthropy. Three-fourths of the regular physicians of this city must look to their professional work for a livelihood, and any system which destroys the popular appreciation of medical services takes the bread out of their mouths. The young physician has a hard enough struggle. His professional brethren should not make it harder. Established practitioners of large means and high reputations can of course get along whether there be free dispensaries or not; but they should think of those who have not yet reached their elevated plane. If all the magnanimous traditions of the profession are to be forgotten, and it is to become a merely commercial business, with unlimited competition and the highest prize to the sharpest and the meanest, then away with the Code of Ethics, and let us all rush into the brutal scramble and *scabies occupet extremum*; but if medicine is to remain a liberal profession, then let some liberality be manifested to the younger men, whose practice is of necessity among the poorer classes, and who are driven to the wall by the pernicious system which teaches the poorer classes that they need not pay their doctor.

Recollect that I speak of the abuse of dispensaries. Were their facilities at the command of none but those really unable to pay, their worst evil would be corrected; but every man who has had much experience in them knows that among the motley crew which resorts to them are large numbers who earn good wages, and many who are property-owners.

And, now, what remedy have we for this social malady? I have no specific. I am not a homœopath. The recognition of the evil has led to some earnest endeavors

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for its cure. Three years ago, a great effort was made. On the 24th of January, 1880, there was in this room a largely-attended meeting of the medical men of Philadelphia Dr. S. D. Gross presided, earnest addresses were delivered, and, if one might judge by appearances, there was great unanimity of sentiment as to the need of reform, and general concurrence in the plan adopted for bringing it about. Several resolutions were brought forward.

Let me quote from one of them as published in a newspaper of the time:

"Applicants with families in receipt of nine dollars a week or more, unmarried persons receiving six dollars or more, and persons living out at service, are able to employ a physician, and should be refused treatment"—(at free dispensaries).

This was adopted with enthusiasm, and there were plans inaugurated for weeding out the impostors, and a standing committee was appointed to carry these resolutions and plans into effect. What came of it? Next to nothing. Only in *two institutions* (so far as I can learn) was the scheme carried out, and then only partially. When a Southern delegate at the subsequent meeting of the American Medical Association in Richmond spoke in high terms of the wonderful system which Philadelphia had adopted to prevent dispensary imposition, the physicians of this favored city received the compliment with a smile that was childlike and bland, and a quiet consciousness that other things besides our female patients sometimes die without an unfavorable symptom.

Lately another remedy has been tried. A provident dispensary, modelled upon the plan of institutions which have achieved considerable success in London, has been established in the southwestern part of the city; and it is proposed to extend the system into other quarters. If this can be maintained as a really provident scheme, it will deserve hearty recognition; but if it drift from its original course and follow in the wake of many of its predecessors,—only the old indiscriminate dispensary, masquerading in a new dress,—it will but aggravate the trouble.

Must, then, this evil go on unchecked? I hope not. I am not prepared to suggest an adequate remedy; but I believe the common sense of the medical profession cannot fail to find one, when thoroughly conscious of the magnitude of the evil. One thing is certain. Experience has taught us that no movement of reform can succeed which is not backed by a strong sentiment within the profession,—a sentiment which will regard with emphatic disapproval any medical man who gives his support to that indiscriminate system of medical charity which necessarily tends to pauperize the people and to degrade the profession.

A CASE OF OBSTINATE CONSTIPATION DUE TO FÆCAL IMPACTION OF THE TRANSVERSE COLON.

Read before the Vanderburgh County Medical Society, March 16, 1883.

BY LOUIS D. BROSE, M.D., PH.D.,

Demonstrator of Anatomy in the Medical College of Evansville, Indiana.

MR. C. J., German, æt. 50 years, a farmer. Upon returning home, after a visit to the city, severe abdominal pain set in, so that he was obliged to go to bed. His trip to the city and return was over a frozen and very rough road, in a wagon without springs. Prior to this trip his bowels had been pretty regular, although a week previous, on account of "feeling continually tired," he had taken three pills, which, he said, had operated two or three times, producing free and soft evacuations. In the next four days his bowels were moved twice, but very little the second time. After his journey to the city he was attacked in the manner stated, his pain continuing and increasing. Being called to see him, two days later, I found the man walking up and down the floor with a board on his belly, complaining of severe pain, which he referred to the epigastric region, radiating towards the symphysis. It was somewhat relieved by pressure. At times it became easier of itself, but never entirely ceased. During this time his bowels remained obstinately constipated, he being unable even to pass wind. The urine was normal in quantity. Four hours previous to my visit he took half an ounce of castor oil, followed two hours later by another half-ounce. He also took an enema of soap and water, but without diminishing his pain. After the first dose of oil, vomiting occurred of a glairy mucus, later of bile.

I gave at once a hypodermic of morphia and atropia, applied a turpentine stupe to the belly, and, after administering an enema of ol. ricini, spts. terebinthinæ,

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soap, and water, succeeded in relieving his pain. The temperature was normal, pulse accelerated. Next morning he was still constipated, although the pain had remained relieved about five hours; but it then returned, and with it vomiting. Morphia, gr. ⅓ every three hours, had failed to give relief. I ordered a pill of res. podophylli gr. j, ext. colocynthi comp. gr. x, leptandrin gr. ij, ext. belladonnæ gr. ss; this to be followed by an enema of soap and water, and internally chlorodyne ♏ v, tinct. capsici ♍ x, tinct. cardamomi ♍ xx, every two hours until the pain was relieved. Towards morning he slept some, but on awaking the pain returned, and I was again sent for. Asking Dr. Babcock to see the case with me, we made preparations for colotomy, should that be necessary, as the patient lived some six miles in the country. We found his temperature 99.2°, pulse 112; breath with a fæcal odor, belly tympanitic, and the patient, through repeated vomiting, whereby over two quarts of a mucobilious fluid had been thrown up, greatly prostrated.

After careful palpation, a soft cylindrical tumor was made out in the region of the hepatic flexure of the colon. It extended some three inches below the liver, was dull on percussion, and sensitive on deep pressure. In the ascending colon there was marked tympany, with an abnormal downward extension of the liver-dulness. To the left of the liver the stomach tympany obscured further investigation of the transverse colon. The descending colon was distinctly resonant. By palpation over the small intestines in the umbilical and hypogastric regions, distinct fluctuating and metallic tinkling could be heard, doubtless arising through the action of the purgatives above the obstruction. A diagnosis of fæcal impaction in the hepatic flexure of the colon was made, and the use of large injections of soap and warm water, with ol. terebinthinæ and ol. ricini, resorted to. Placing the patient in the knee-breast posture, we succeeded, with a Davidson's syringe, in forcing six quarts of fluid into the bowel. As soon as the fluid distended the transverse colon, vomiting occurred of a bilious and mucous character, discontinuing only with the expulsion of the injection. No fæcal matter was brought away, and, the pain continuing, an injection of atropia and morphia was given subcutaneously. During the retention of the injection, our diagnosis as to the seat of the obstruction was confirmed by the persistence of tympany below the hepatic flexure and the increase of marked dulness beyond in the splenic end of the transverse colon. In half an hour the injection was repeated. This time we succeeded in forcing a little over a gallon into the bowel, when vomiting again occurred, and the distention became so great that the patient could not, without much pain, bear any more. The fluid was expelled without any fæcal matter or wind being passed. The abdomen between these injections was well kneaded with ol. ricini. In the course of another half-hour an injection similar to the preceding was administered, this time bringing away a few lumps of extremely offensive, hardened fæcal matter, along with some wind.

His pain was now somewhat relieved, so that in the course of an hour a fourth injection was administered and the patient directed to retain one-half of it as long as possible. A nourishing diet of broths, milk with the brandy and egg mixture, every hour, was directed, together with instructions that his abdomen be kneaded with ol. ricini every three hours. Morphia was prescribed as before, every two hours, should his pain demand it. The following day, at our next visit, we learned that about five o'clock the preceding afternoon our patient had had an evacuation containing some solid fæcal matter along with considerable liquid fæces. I now attempted to pass by the rectum a stomach-tube, and succeeded in penetrating the bowel twenty-three and a half inches. Our efforts to administer an injection through the tube failed, and upon its withdrawal we found that the extremity had encountered fæcal matter, with traces of softened fæces along the sides of the tube. The abdominal tympanites with the vomiting and pain were much diminished; temperature 99.4°, pulse 116, having lost much of its volume and strength.

At our first injection we again threw in six quarts of fluid, and again caused vomiting on distending the transverse colon. The enema brought away some fæcal matter, and was repeated in half an hour, but returned little contaminated with fæces. A third injection was given, and this time the fluid seemed to have penetrated the obstruction, as dulness was now found on percussing the previously resonant ascend-

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ing colon. Again having the patient retain as much of the injection as possible, we directed a narcotic, continuing the nourishing diet, with repeated kneadings of the abdomen. He rested well during the night without the use of morphia, and since our last visit had had three large evacuations, mostly of fluid fæcal matter. There had been no vomiting since the preceding evening; the abdominal tympanites had almost disappeared, with a pulse of 96 and a temperature of 99°. We again administered a gallon of injection, and brought away more fæces. One-half hour later we injected a pint of warm olive oil, and then forced the oil into the descending and transverse colon by an injection of soap and water. This he was instructed to retain as long as possible; when, after the lapse of four hours, drachm doses of sulphate of magnesia were to be given every two hours until six doses had been taken. This moved his bowels five times, each stool containing much fluid fæcal matter. His temperature and pulse became normal, the pain disappeared, and the patient expressed himself well, only very weak.

The case illustrates how little a cathartic is to be trusted for the relief of chronic constipation. One week previous to his illness the patient had, by means of a purge, moved his bowels a number of times, yet did not discover either unusually large stools or the presence of unnaturally hard scybalous masses. Still, the intestines retained a large amount of fæcal matter, and the opening through this mass was undoubtedly influenced and finally occluded by the great jolting sustained in a journey over a rough and frozen road. In several instances recorded where large enemata of water have been used, mention is made of vomiting, but attributed to the complete distention of the alimentary canal and the entrance of the injection into the stomach. Dr. Prince, in the *St. Louis Medical and Surgical Journal* for February 22, 1883, says two quarts of matter were thus vomited, and cites Dr. Battey as having a case where the injection, soap, was tasted in the mouth. In the present case, although the patient vomited frequently while the injections were being administered, I could not attribute it to a similar cause, as it invariably ceased as soon as the pressure of the transverse colon on the stomach was relieved by expulsion of the fluid. I must even doubt his statement that he succeeded in injecting the stomach, as my patient vomited over two quarts of matter before forced enemeta had been given; hence it could not in this case be attributed to their passing the ileo-cæcal valve and filling that organ.

Again, I frequently noticed, while resident in the German Hospital, Philadelphia, that after the use of injections of ol. ricini, and their retention by patients, they often remarked that they could taste the oil, even when it had been given without their knowledge. Therefore the fact that Dr. Battey had a patient who tasted soap after an enema is not proof of its having been injected into the stomach and then vomited.

Dr. Illoway, of Cincinnati, in "Some Remarks on Intestinal Obstruction," *Medical Record*, December 30, 1882, says "that an enema to be curative in such cases must possess sufficient force to break down a mass of hardened fæces. It must have force enough to pass the ileo-cæcal valve."

To administer such an injection he uses a force-pump with a stroke of one and one-half inches. I only mention this pump to condemn it, as the danger in using so much force must be apparent to all, especially when we remember the fact that the gut has necessarily already been greatly weakened by prolonged and enormous distention, and that it often, in addition, contains ulcers. With the ordinary hand bulb-syringe, notwithstanding his statement that it possesses no force, I distended the bowel to such a degree that the patient would not permit of the further introduction of water.

NOTES ON HAMAMELIS: ITS USE IN VARICOSE VEINS.

Read before the West Philadelphia Medical Society

BY J. H. MUSSER, M D.,

Chief of the Medical Dispensary of the University Hospital.

MY attention was first called to Hamamelis Virginica, or witch-hazel, by my friend Dr. Stehman, now of Lancaster, when we were colleagues in Blockley Hospital. He asserted its wonderful power in the control of hemorrhage—even the slight oozing from flesh-wounds—when given internally. At the same time a fellow-resident had numerous attacks of pulmonary hemorrhage, and invariably controlled them by this drug. This introduction interested me in the drug. I

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have ever since made use of it, and eagerly read of its virtues. In hemorrhage, especially nasal, pulmonary, and uterine, it has been of good service. In hemorrhoids I have used it both locally and by the mouth, at times with the happiest results, again with ignominious failure. It is difficult to detail the class of cases in which it failed, however: its use was empirical.

It is to the treatment of varicose veins by hamamelis that I wish to call especial attention. Although Mr. Gay does not believe it possible for one to do more than relieve the varicosity,—"the friendly stocking cannot be cast off, nor the pristine exercises again indulged in,"—it is my purpose to show that with this drug we have not only a palliative but also a powerful remedial agent, and through its influence "pristine exercise" can be indulged in. In fine, I believe that varicose veins can be cured by witch-hazel. The records of four marked cases that were cured will be detailed. Eight other cases could be recorded, were it not that it would be mere repetition. All the cases are now and have been under direct observation. In not one has there been a recurrence of the disease, although even the friendly stocking has been cast off.

The first opportunity I had of using the drug for this disease of the veins was when Miss M., a middle-aged woman of the laboring class, applied for treatment. The veins of both legs were enormously enlarged and painful; there was slight œdema of the ankles, and she had pain in the calves at night, with "cramp" of the muscles (due to deep varicosity, some authors say). She had been treated by various methods without relief. The fluid extract of hamamelis in teaspoonful doses, four times daily, was ordered. The visit was in May, 1882, and was not repeated; but in June I met her to hear her report freedom from distress, and to see but little noticeable enlargement of the veins, if any. In February last (1883) I saw her to verify the good result of the treatment. Four ounces only of the fluid extract were used.

The second case is that of a married laboring woman, æt. 52. She was treated in 1880–81 for ulcers of the foot, of syphilitic origin, with success. They were on the inner aspect of the foot, below the ankle-joint. In the spring of 1882 ulcers recurred, seated on the inner aspect of the leg, at the junction of the middle and lower thirds. Without much thought or observation, the cause of the former ulcers was attributed to these, and a similar treatment was employed. Mercurials and iodides, in large and small doses, singly and in combination, tonics of all kinds, local stimulants, sedatives,—everything I could imagine,—were used for six months, with but temporary relief or healing of the ulcer. Finally, a mental overhauling of the case, and careful study of the ulcers and the vessels and other tissues of the leg, led me to decide that the prime cause was not syphilis, but varicose disease. The veins were enlarged, the ankle swollen from œdema, and the skin bronzed and indurated, while the ulcers were not of the characteristic appearance of those of syphilitic origin. Some of them began by subcutaneous death of tissue first, as from hemorrhagic infarcts. After this decision she was treated as the first case noted, with permanent relief, being actively engaged the entire winter in laborious household duties without any return of her suffering. The treatment was continued persistently one month, and, fearing a relapse, less actively a subsequent month. I may add that no anti-syphilitic treatment had been used two months prior to the use of this drug, and that two weeks' treatment sufficed to heal the sores and relieve the pain.

The third case is the most remarkable of all, illustrating the powerful action of the drug on the venous system. Had the patient not been known to some of you, both on account of the severity of the disease and the very prompt relief afforded, I should have hesitated to put his case on record. Briefly, his history reads as follows. S., laborer, æt. 57, German, healthy in every respect save the varicose disease. Disease of left leg of the longer duration and the most severe. In 1865 the leg was injured, and varicosity dated therefrom. Two years afterwards an ulcer developed. In course of time there were numerous ulcers, œdema became marked, the veins more and more enlarged, skin induration and bronzing grew very pronounced, while he was racked with pain and tormented in later years by a persistent, weeping eczema. The venous disease of the right leg was of three years' duration only, and hence the secondary symptoms were not so marked. The local inflammation, ulceration, and œdema of both limbs were so distressing

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that for nine months prior to consulting me he was unable to work, and the last three months he spent in a hospital. He had been in hospitals three times in the past six years, with but temporary relief each time. When I saw him, in July, 1882, the legs were in the condition above stated. He suffered especially from pain, not being able to bear the weight of bed-clothing, and what most grieved him was that he had been unable to wear boots for four years. It is needless to remark that such a man was a burden to himself and his family, and that his prospects of earning his bread were very poor. He was ordered a soothing ointment and the hamamelis. Great relief was soon experienced, and in six weeks he considered himself cured. At my earnest solicitation, he continued the medicine, though not constantly. Since October he has done laborious work, chiefly as mason-tender, and, more marvellous to him, he could wear boots. One can scarcely conceive the wonderful change in this man's legs. They have much diminished in size; the inflammation, the ulceration, and the œdema have entirely disappeared; the veins are much lessened, almost of the normal size. It is true there is extensive skin induration and discoloration, but all else has been removed, and with it the terrible pain and the inability to work.

The last case I will call attention to is that of one of varicose veins in pregnancy. The patient always suffered from this disease while pregnant, and she consulted me early (third month) on account of this tendency, the torture becoming in the latter months unbearable and the swelling of the vulva and anterior vagina so great as to render labor serious. So often do cases of this kind improve spontaneously that it would not be proper to base the value of hamamelis on one single case. But, as this patient had previously suffered until the end of term without relief, her cure may be considered a fair test of the drug. The fluid extract was used, as in the former cases, and in addition the so-called extract of the shops, sold by the pint, was applied as a lotion.

In addition to the above, I have the notes of eight other cases that were treated with like success. Five of the cases were females, the remainder males. In three the varicosity and pain were complained of, in three œdema in addition, and in two all these symptoms, with skin induration and inflammation and secondary ulcers. One of the patients suffered at the time from rheumatic gout. A female had varicose disease of the left leg only. The only obstinate case was that of a woman with disease of the aortic valves; but finally the affection was overcome, as in the other cases referred to.

This completes the series, and I hope it proves beyond doubt that in hamamelis we have a powerful agent to combat this troublesome affection. I had been unaware of its being applied in this manner until looking the matter up, although its action on veins was familiar to me. It may be of interest to cull from the text-books some of the remarks made on this drug, where any are made. The surgical treatises on varicose disease, and the works of Agnew, Ashhurst, Gross, and Holmes, do not refer to it. It is modestly hoped that its use will replace the many difficult and dangerous operative methods recorded in the above works. The drug is assigned value by Ringer in cases of hemorrhage, hemorrhoids, and varicocele. Bartholow says it is of value in non-inflammatory diarrhœa and hemorrhages. Wood does not mention it. Philips recommends its use in varicose veins in addition to the above.

A word as to the preparation and method of using hamamelis. A fluid extract, a tincture, and an "extract" are used. The famous Pond's extract, which is only a distillate, is made from the twigs and leaves. This "extract" sold by the pint is a clear liquid for external use. The tincture is recommended by Philips in from two to ten minim doses, by Ringer in one to two minim doses, every two or three hours. Ringer says larger doses cause headache and throbbing. Bartholow advises the fluid extract in doses of one or two drachms. The latter is the preparation that was used in the above cases. It was always given in teaspoonful doses. The preparation made by Bullock & Crenshaw was the most satisfactory. Care must be used in the selection of the drug, as the market is full of poor extracts. No unpleasant sensations in the head were noted in any case; in one instance it caused vomiting. It is not as repugnant as ergot, and can be relied on in many cases in which that drug is used.

3705 Powelton Avenue.

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NOTES ON THE TREATMENT OF CHRONIC ECZEMA OF THE SCALP.

BY W. THORNTON PARKER,
Acting Assistant-Surgeon, U.S.A.

CHRONIC eczema of the scalp is so commonly met with in practice, and the treatment recommended in our "text-books" is so unsatisfactory, that I venture to offer the following treatment. It has proved to be very successful in my own practice, and I believe will be also in the majority of cases.

This disease, which is so distressing to the parents and so wearing upon the strength of the child, seems in many cases to be aggravated by over-treatment, or else is too often given up as hopeless. Frequently the parents are assured that there is nothing to be done for it, and that, after waiting a number of years, the little sufferer will have outgrown it. Several cases have been placed in my care which presented such discouraging appearances that I confess I felt little hope of a successful issue. In some of these cases the list of remedies used would wellnigh startle one to consider. All kinds of ointments, lotions, blood-purifiers, and tonics had exhausted their effects. I do not wish to be understood as claiming that this disease is easily cured, for every one knows that the prognosis is exceedingly doubtful in the majority of cases as to the duration and to the probabilities of return after a cure seems complete. In very many instances remedies are employed which arrest for a time the eruption, but just as soon as they are withheld the flame burns on as brightly as before: the fire is not extinguished. With some remedies we obtain a condition so injurious to the health of the scalp that, should they be persisted in, the chances for cure would be absolutely hopeless. We find very much to be undone, and not only valuable time lost, but the whole constitution suffering from the severe and uncalled-for treatment which it has received. It is impossible to treat eczema of the scalp successfully without considering the constitutional treatment of the very highest importance. A very general opinion seems to prevail that eczema must not be too rapidly healed, lest it "strike in." With all this popular prejudice against healing the disease too rapidly, the remedies in common use are too severe, and the general treatment fails because it is so harsh. Gentleness is positively necessary in treating not only the local symptoms, but the constitutional as well.* Even a fatal case of eczema larvale is reported where the treatment was undoubtedly erroneous. It is useless to attempt a successful treatment unless local and constitutional remedies are combined; to use the one without the other is perfectly useless, and, besides consuming valuable time, adds to what is often nearly despair in the parents.

We have first, of course, to consider the constitution of the little patient. The drain upon the strength has been great. The blood is in an impoverished state. Probably from the loathsome nature of the complaint, there has been too much confinement to the house. This shutting up of such patients is also owing to a fear of their taking cold, and likewise to the fact that exposure to even gentle winds sometimes produces severe pain in those suffering from eczema of the scalp.

First, then, are pure air and exposure to the sunlight, healthy sleeping-rooms, good bedding, generous milk diet, oatmeal and cracked wheat, well-baked bread and sweet butter, rare beef and baked potatoes, little greasy food, no pies or pickles, candy untasted, regular habits, and careful attention to the bowels, using for that purpose stewed prunes and some figs. Should constipation exist, it should be treated with enemata or with some mild pleasant aperient like Brewer's tartrate of soda, but positively no cathartics. Symptoms of indigestion can be treated with some preparation of pepsin. The daily sponge-bath is strongly recommended, although it would be useless in many cases to insist upon it, owing to the very prevalent objection against cold sponging. The constitutional remedy which is most indicated and which yields the best results is *Wyeth's dialysed iron*, to be given in from six- to ten-drop doses, five times daily, in a little water. I am particular to write for and to insist upon getting *Wyeth's dialysed iron*, for even if there be preparations of dialysed iron for sale in our drug-stores, made by other firms and "equally good," it is a fact that a large proportion of such preparations are valueless, and have undoubtedly injured the good reputation of the most valuable chalybeate we

* Diseases of Children, Meigs and Pepper, seventh edition, p. 942.

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have, the dialysed iron of Wyeth. In the majority of cases no other constitutional remedy is needed; although I have found in some cases, where the skin was dry, that nightly inunctions of olive oil were highly beneficial.

We now come to the consideration of local remedies. It is shocking to contemplate the violent local remedies which have been and are at present in use, and are even recommended by our leading authorities. The best treatment, in my opinion, consists in commencing with having the hair cut as short as possible, and then thoroughly and *gently* washing the head with the purest soft water and the *best* Spanish soap. It is particularly necessary to secure the *best* Spanish soap, and this is always very expensive, but well worth the money. In bathing the head—which should be done, if possible, in a pleasant, comfortable room, and in the sunshine—abundance of water should be used, and not a small basinful. The head should be dried slowly, and plenty of soft, clean towels used, which should afterwards be immediately boiled. And here let me say that *cleanliness* is of the utmost importance in the management of these cases. Not only should the pillow-case be changed every day, but a new bleached cotton hat-lining should be made every day, and the old one either boiled or destroyed. No covering for the head should be worn either by night or by day other than the usual out-of-door hat. After the head has been carefully and very gently washed, cosmoline (ung. petrolei) should be spread all over it very carefully, and a clean linen handkerchief tied around the neck. The patient should remain in the house and in a comfortable room for at least a half-hour before going out. This application and bathing should be done at least once a day, and not oftener than twice. Perhaps it may be found that the best results would be obtained from morning and evening applications.

The carefulness with which minute details have been mentioned may seem trivial, but a necessity exists for just such efforts at clearness. The disease under consideration requires the most careful attention to these little matters, which, if properly attended to with system and perseverance, will, I feel quite confident, reward all concerned.

Fort Elliot, Texas, March, 1883.

NOTE ON SEBACEOUS CYSTS CONTAINING HAIRS.

BY V. M. REICHARD, M.D.

SEBACEOUS hair-containing cysts are exceedingly uncommon, except on the faces of those who are regularly shaved. They are more common where the shaving is "close." The opening of one or more sebaceous glands being at the point where the hair emerges from the cuticle, if from any cause acting while the hair is beneath the skin (as "close" shaving) the opening becomes closed, a cyst may be formed. As the hair continues to grow, it strikes against the top wall of the cyst, which it is unable to penetrate, and therefore is reflected, ultimately forming a coil. If the cyst be opened early, before the direction of the hair has become permanently changed, the trouble is over. But if it be delayed until the hair has made one or two spiral turns, the hair, having acquired a vicious habit, does not straighten and will not protrude. In this way it serves as a constant irritant to the derma, the gland is kept more active, and on the other hand so much inflammation is kept up as to close the opening permanently. The contained hair may thus attain considerable length.

If, after expressing the contents of such a sebaceous cyst once or twice, the cyst continue to fill, it is always well to suspect a hair as the cause. In fact, there are many men who can tell by the peculiar feeling of local irritation that there is a retained hair. If a hair be suspected, remove the top of the cyst and explore with a small pair of dressing forceps. The hair can always be discovered if it be present. When found, all that needs to be done is to pull it out by the root, and the trouble is over, so far as recurrence is concerned. Whether or not this will serve for a large cyst I cannot say. But I have known hairs two inches long to be removed in this way. Epilation destroys at once the cause of the irritation and the source of the accumulated secretion, as the sebaceous gland must be more or less disturbed by the process. I have not examined microscopically these hairs, and cannot say positively that the gland is removed, but from its close proximity to the hair-bulb it would be only natural to suppose that any interference with the latter must seriously affect it.

Fair Play, Maryland.

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NEW OPERATION FOR PHIMOSIS.

BY P. G. SKILLERN, M.D.

I WISH to invite the attention of the profession to a method of performing the operation of circumcision which I originally proposed and have since performed upon several cases of phimosis. The object sought to be attained is to excise both prepuce and mucous membrane at the same time, so that when the forceps are removed the glans penis will be at once entirely clear of both. In the ordinary manner of operating, it frequently occurs that the lining membrane of the prepuce covers and entirely surrounds the glans after the foreskin is removed, so as to necessitate slitting it up afterwards. This is a real annoyance, and also protracts the healing considerably.

In performing this operation, the foreskin is to be retracted until the junction of skin and mucous membrane is reached, or as nearly so as may be desired; then three small hooks attached to a chain—somewhat similar to those contained in a post-mortem case, but smaller—are inserted from within outwards, at equidistant points, first through the mucous membrane, then through the skin, thus fixing the two in their new relation to each other, so that when traction is made the mucous membrane is put upon the stretch. A grooved director is then passed around the glans, so as to break up any existing adhesions. Now, the chain being kept taut, the forceps (see figure) are applied, and a threaded needle

passed twice through the fenestra of the forceps, so as to leave two long threads passing through both skin and mucous membrane. The prepuce is then divided close to the blade of the forceps, and the latter removed. After ligaturing the small vessels, if necessary, the threads are raised on a director from the centre between the remaining prepuce, and divided so as to leave four separate and distinct sutures, which, when tied, will leave both skin and mucous membrane nicely coaptated.

This is the operation as done with the author's forceps. The results obtained by it in several cases in which it has been used have been all that could be desired.

427 SOUTH BROAD STREET.

TRANSLATIONS.

A PECULIAR CASE OF RHEUMATISM.—In a clinical note, entitled "A Contribution to the History of Rheumatism and its Complications," Dr. Metzquer reports (*La France Médicale*) the following interesting case, in which rheumatic inflammation occurred primarily in organs which usually are affected only secondarily. A young man, 23 years of age, having become overheated and chilled, was seized with the signs of right-sided pneumonia, with rusty sputum, stitch in the side, dulness on percussion of lower lobe of lung posteriorly, with crepitation and blowing respiration. Three days later the pulmonary symptoms had entirely disappeared, but the patient still had fever, complained of headache, with epistaxis, and severe pain in the abdomen. The next day the abdomen was swollen, tender to the touch; in the right iliac region there was gurgling on pressure, and there was diarrhœa, but there were no rose-colored spots. The tongue was dry, and the lips were covered with sordes; the face was typically typhoid. A few days later these symptoms entirely disappeared, and the pulmonary phenomena returned, with cough and rusty sputa; but these soon passed away under vesication and tartar emetic, and, on the next day but one, there were no râles or blowing respiration, no oppression, no stitch in the side, but the patient's general condition seemed getting worse instead of better, and he became delirious, and, finally, comatose. On the tenth day of his illness he revived somewhat, and recognized those around him; the tongue was still rather dry, and the lips dark-colored. Now, upon auscultation, a systolic mitral murmur was detected for the first time, and in the next few days there were signs of embolism of the brain and of the spleen. Acting upon the view that the disease after all was rheumatism, blisters were applied to the knees, although none of the articulations up to this time had been inflamed or painful. The knees now began to show the ordinary appearances of acute rheumatism, and were very painful. From this moment the general condition improved, and the patient became fully convalescent.

In commenting upon this very interesting case the reporter looks upon the early pulmonary engorgement, the subsequent enteralgia with diarrhœa, and the final

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endocarditis, with its attendant embolisms, as expressions of an attack of acute rheumatism. This view is based upon the suddenness of onset, the rapid changes, the endocarditis, and, finally, upon the fact observed that when the joints were involved the morbid action spent itself and disappeared.

BRAIN-LESIONS OF TRAUMATIC POLYURIA.—In a young man who had suffered a severe blow upon the left side of the head and neck, temporary unconsciousness was followed by diplopia, which gradually disappeared, and by deafness in the left ear. He also developed inordinate thirst and polyuria. Upon examination, there were discovered the following morbid signs: complete paralysis of the left external rectus and slight paralysis of the right external rectus. In the left ear there was loss of perception of tones as such, and of power to distinguish them except when the tuning-fork was placed over the mastoid process. The watch could be heard the same on both sides. The quantity of urine was twelve litres (nearly twenty-six pints); neither sugar nor albumen was detected. Under the use of iodide of potassium internally and inunctions of mercurial ointment at the back of the neck, there was a decided reduction in the polyuria.

Dr. Flatter, who reports the case (*Arch. für Psych.*, etc.), believes that the symptoms indicated the existence of an accumulation, possibly hemorrhagic, lying deeply in the medulla oblongata under the nucleus of the left external rectus, not only destroying the roots of this nerve, but also extending across so as to affect the nucleus of the right abducens as well. The cause of the peculiar difficulty of hearing, however, is not clear.

In the literature of diabetes insipidus and brain-injury it is of interest to note that two other cases (Kamnitz and Gayet) of paralysis of the sixth nerve have been observed accompanying diabetes.—*Central. für die Med. Wissenschaften*, No. 5.

THE PARASITE OF YELLOW FEVER.—The contagium vivum of yellow fever, according to Dr. Carmona (in *La Gazette Médicale de Mexico*), is a spore and mycelium, to which he gives the name of *Peronospora lutea*. It is found in all the secretions, and also in the blood, in the serum of blisters, etc.

In making some experiments upon animals, it is claimed that he found that the urine containing these organisms, if injected under the skin of rabbits and dogs, produced a febrile reaction lasting two or three days, during which the spores were also present in the urine of the animal. Furthermore, the animal was not affected by a second injection. He concludes, therefore, that in order to protect from yellow fever, it is only necessary to inoculate with a small quantity of water in which the specific fungus has been artificially cultivated.—*Bull. de Thérapeut. Méd.-Chirurg.*

EFFECTS OF AGENTS INTRODUCED INTO THE EAR.—Brown-Séquard announced not long ago that the introduction of a few drops of chloroform into a guinea-pig's ear causes death by meningo-encephalitis. Vulpian has more recently shown that the introduction of hydrate of chloral into a rabbit's ear causes extensive muco-purulent bronchial effusion, lasting for several hours, which may cause death. Small doses, which do not give serious symptoms at the time, are sometimes followed by vertigo, lasting for a month or more. The application of these facts to the local treatment of earache or neuralgia by instillation of chloroform, ether, creasote, etc., is very evident.—*Acad. des Sciences.*

EPILEPSY AFTER ALCOHOLIC EXCESS.—The occurrence of epilepsy in subjects of chronic or acute alcoholism is not very rare. Dr. W. Raab (*Wiener Med. Blätter*) lays great weight upon the condition of the brain in such cases, inasmuch as the same result has not been obtainable by animal experimentation. The author considers that where epilepsy appears it indicates a peculiar or diseased state of the brain, either due to inherited defect or to injuries to the head, concussion of the brain, or certain acute diseases developing in the system, which predispose to disturbances in the domain of the central nervous system. A number of interesting illustrative cases are reported.—*Deutsche Medicinische Zeitung.*

EXCISION OF CHANCRE.—In the *Vierteljahrschrift für Dermatologie und Syphilis* Dr. Bumm reports a number of cases in which excision of the initial sclerosis of syphilis was performed. He is of the opinion, based upon personal observation, that the general invasion of the system by syphilis only occurs after the development

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of the primary lesion. In some cases of characteristic hard chancre the excision of the sore was followed by immunity from syphilis. When the lymphatics of the groin are enlarged, they may also be removed with advantage in some cases, as they were found to contain syphilitic virus, and taken in conjunction with the chancre they are the places of principal deposit of the infection.—*Centralblatt für Chirurgie.*

THE PROXIMATE CAUSE OF FEVER.—Prof. N. Zuntz, from a series of experiments undertaken to discover the source of the increased oxidation and tissue-combustion which occur in the febrile process, concludes that it is to be regarded as residing in the nervous system, rather than due to a ferment in the blood. In curarized dogs, it was found that the injection of a pyrogenic agent which caused fever-phenomena in other animals was not in this case followed by increased absorption of oxygen, and the amount of carbonic acid excreted remained constant. The author, therefore, believes that the innervation of the muscles is responsible for the febrile increase of the processes of oxidation in the animal.—*Centralblatt für d. Med. Wissenschaft.*

TREATMENT OF PUERPERAL SEPSIS.—In a recent paper on this subject by Dr. Fischel the value of local treatment is especially insisted upon (*Archiv für Gynaekologie; Deutsche Med. Zeitung*). For all abrasions or ulcerated surfaces discovered by the speculum examination, potassium permanganate solution and tincture of iodine, or solution of chloride of zinc, are used; and subsequently irrigations of uterus and vagina with antiseptic solutions are required. Since the introduction of this method into the practice of the Prague clinic, it has been claimed that its mortality-rate is better than that of any other German clinic.

SPONTANEOUS DEVELOPMENT OF GAS IN THE BLADDER—DIABETIC PNEUMATURIA.—In rare instances of stone in the bladder it has been observed that gas may escape from the urethra with the urine, where no fistulous connection with the bowel can be assumed to explain it. M. Guiard has found that in several cases of this character there was sugar in the urine, and he attributes the formation of the gas to decomposition of the diabetic urine under the action of a ferment while still contained in the vesical cavity.—*La France Médicale*, February 10.

PYROGALLIC ACID IN PHAGEDÆNIC CHANCRE.—Before the Paris Academy of Medicine (*Progrès Médical*, No. 1), M. Vidal recently read a communication recommending the treatment of phagedæna by the following:

℞ Acid pyrogallic, 20 gm.;
Vaseline, 80 gm. M.

Or it may be used in the form of a powder by substituting starch for the vaseline. It is to be applied night and morning. As soon as the surface becomes healthy, simpler dressings are substituted, the subcarbonate of iron being preferred.

ACTINOMYCOSIS IN THE HUMAN SUBJECT.—Mossdorf and Birch-Hirschfeld report (*Dresden Jahresbericht für Natur- und Heilkunde*) a fatal case of actinomycosis which was diagnosticated during life. The case had for six months suffered with symptoms of pleuro-pneumonia, or an encapsuled purulent pleural effusion, with occasional pyæmic chills, rapid emaciation, and colliquative discharges. The right pleural cavity contained masses of actinomycoses, which had invaded also about two-thirds of the right lung. There was also a fistula running beneath the muscular structures and the sternum. The pleural cavity, as well as the fistula, was partly filled with grayish-yellow stinking masses with scattered sulphur-yellow conglomerations of the spores of the fungus, and partly with a tough, jelly-like tissue which contained the former in considerable quantity. No collection of fungus was found in the mouth, but it existed in the bronchial tubes of the left side, on the heart, and in the left kidney. In the right lung the tissue was to a great extent gangrenous, but on section there were still seen bronchial aggregations of the fungus, mixed with epithelial cells.—*Centralblatt für d. Med. Wissenschaften*, No. 11, 1883.

RUPTURE OF THE SPLEEN IN RELAPSING FEVER.—Petersen reports (*Petersburg Med. Woch.*) fifteen cases of spontaneous rupture of the spleen in relapsing fever: in seven sudden rupture occurred, with extravasation of blood in the peritoneal cavity and speedy death; in eight the rupture followed local softening (infarction) and suppuration, resulting in death within a few days with purulent peritonitis.—*Centralblatt für d. Med. Wissenschaften.*

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PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, APRIL 21, 1883.

EDITORIAL.

PROPOSED LEGISLATIVE REGULATION OF PLUMBING AND HOUSE-DRAINAGE.

ONE of the vexed questions of State medicine and municipal hygiene is the disposal of sewage in such a way as to relieve the community of a most prolific source of sickness. Whether diphtheria, typhoid fever, or other specific disease is caused directly or indirectly by sewer-gas, we shall not stop to discuss, but will merely assert the universally-acknowledged fact that sewer-gas is inimical to health, and therefore, as physicians and sanitarians, we are interested in public measures looking towards some intelligent supervision and regulation of the subject of sewerage and the house-connections. In ancient Rome such subjects would naturally come under the consideration and control of the ædiles, physicians who were charged with inspecting the sanitary conditions of new buildings. Unfortunately, our advanced civilization has hitherto neglected almost entirely to profit by this classical example.

The ordinance, which we understand was offered to Councils last Thursday by Dallas Sanders, Esq., to regulate the registration of plumbers and the drainage of houses, is in the main the same as that which was submitted to the Survey Committee of last Councils by a committee of twenty-one appointed to consider the matter. The most important subject of the whole ordinance is the creation of a commission consisting of one plumber, to be annually elected by the Association of Master Plumbers, one architect, by the Philadelphia Chapter of the American Institute of Architects, and one physician, by the County Medical Society, all eligible for re-election, with the chief engineer and city surveyor and the President of the City Board of Health, making in all a board of five. This commission will have authority to appoint eight district inspectors, who must be practical plumbers, and who, apart from any political influence, will see that the requirements of the ordinance are carried out in all their details. These inspectors will have a responsible position, and it is right that their appointment should be made with great care and by a body that can never be subservient to any existing political influences. Such a commission, constituted as we have outlined, would be an advisory body, as it were, with power to act, composed of representatives of such bodies as are constantly brought face to face with the practical problems which these rules and regulations seek to solve, with the concurrence of the Survey Department and the Department of Health, and it would almost render additional legislation, with binding rules and regulations, superfluous. It is impossible to legislate for all emergencies, and the very object sought to be attained by the appointment of this commission is to have a responsible and competent authority which shall interpret the spirit of the law with all the light the various branches of science can throw upon it, and to appoint honest and competent inspectors, on good salaries, who shall be held additionally responsible for the carrying out of all work upon the basis of the plans approved by the commission. We recognize the fact that it is mainly the poor plumbing of the day which characterizes many of our most attractive-looking dwellings as veritable death-traps; possibly not entirely through the fault of the plumbers, but partly from a spirit of ill-judged economy, the outgrowth of the avarice of builders, or of the ignorance of owners, or of all combined. This matter touches the Councilman as well as the citi-

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zen; he is legislating not for an individual class who demand protection, but for a whole community of which he is a member; it becomes a matter of health and life, far removed from pecuniary or political motive; he defends his own health and the very existence of those dearest to him, now daily jeopardized by avarice or ignorance. We speak thus strongly, for we feel that we merely repeat scientific truth already expressed by leading medical men both of this country and of Europe. The neglect of the most evident hygienic precautions, the pollution of drinking-water, the frauds and fatal ignorance in matters of house-drainage, the abominable sewers, and the wide distribution of the contagia of disease, are the prevailing evils of the day; these are sapping the life of the coming generation, and demand the immediate and urgent attention of our legislators. A great responsibility also rests with the family physician in this matter, for he, most of all, can, and therefore should, interest himself in public preventive measures to restrict the spread of disease. We think that this ordinance deserves the earnest consideration and support of all, and we hope that our representatives in Councils will feel that, in thus protecting the lives of citizens and of their own families by lifting these matters out of the arena of party politics, they are cordially supported by the mass of the medical profession of the city. It is an oft-repeated statement that with vaccination ends public interest in the subject of sanitary science; but other forms of zymotic disease besides variola stand in need of judicious and statesman-like consideration. The value of preventive measures in smallpox is generally recognized; it is less well known that wise administrative ability is just as efficient in the management of other epidemic influences. In Philadelphia, for fourteen years prior to 1882, the mortality from diphtheria was 4440 (no cases having appeared in the record of the Board of Health prior to their report of 1860). In twenty-one years prior to 1882 there were fatal cases of scarlet fever to the number of about 8168, and of typhoid fever 9887,—both of which are universally regarded as preventable diseases,—out of the total general mortality during that time of 356,246. As each of these cases represents from fifteen to twenty cases of sickness from zymotic disease, it is easy to calculate the loss of life, labor, and money to the community from disorders which sanitarians recognize as being most prevalent under unhygienic conditions, prominent among which are bad sewerage and defective drainage.

ENTOMOLOGICAL JOTTINGS.

OF all the naturalists this country has produced there is not one who is more successful in gleaning important practical matter from what might at first appear barren waste of abstract science, than is Dr. Charles V. Riley, entomologist to the Agricultural Department. He also seems to inspire his assistants with like useful zeal. His Report for 1882, recently printed, is mostly interesting to the horticulturist and farmer, but it contains some things which are worthy of note here. There may be mentioned the descriptions by Prof. I. Henry Comstock of two new lac insects, one of which infests the shrub Tarrea Mexicana, or creasote plant, which grows so abundantly in the far Southwest, and which not even a starving mule can eat or a freezing frontiersman burn. Possibly this shrub, hitherto accursed by every traveller as a useless impediment, may become the basis of an important industry. Of more immediate importance is the report on Pyrethrums, which shows that in the latitude of Washington the two species *P. cinerariæfolium* and *P. roseum* will both grow perpetually, and produce flowers whose powder is as effective as that of the imported blossoms. This is in conformity with the experience of our own well-

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known botanist and arboriculturist, Mr. Thomas Meehan, who finds that *P. roseum* is readily grown near this city; and we believe it has also been successfully cultivated in California for several years. There seems to be no reason why every country housekeeper should not raise her own insect powder.

LEADING ARTICLES.

CARBOLIC ACID: ITS FATE AND ITS ANTIDOTE.

RELIABLE statistics seem to show that carbolic acid has produced nearly two hundred fatal recorded accidents since its introduction into modern medicine, and that it therefore occupies a first place among poisons. The frequency of its taking, and the fact that it is a universal poison, killing heart, nerve centre, and indeed all forms of protoplasm, lend importance to the question of its antidote.

Some years since, Baumann and Hueter, finding that the sulphates disappear from the urine during carbolic acid poisoning, suggested the employment of soluble sulphates, or their acid, as antidotes, and experimentally showed their value. Subsequently Dr. David Cerna, in an elaborate series of experiments made in the laboratory of the Medical Department of the University, found that the powers of the sulphates had in no respect been exaggerated. The peculiarity of the antidote is that it seems to be equally effective after as before the absorption of the poison.

To this there is nothing comparable in toxicology, unless it be in the union which takes place between iodide of potassium and various metallic salts which may have accumulated in the system, and leads by the formation of a soluble compound to elimination. In this case, however, the comparatively inert form of the metal is changed into an active poison, so that, for example, mercury which has been latent, as it were, in the system may after the use of the iodide cause furious salivation.

The peculiar practical relations of carbolic acid and the sulphates are beautifully explained by modern chemical researches upon the formation of carbolic acid in the animal organism, and upon its fate in the body.

Städeler first discovered that when sulphuric acid was freely added to cow's urine the latter yielded upon distillation carbolic acid, and concluded therefrom that normal urine contains carbolic acid. He has been corroborated by Buliginsky and by Hoppe-Seyler, and phenol is certainly a constituent, not only of the urine of cattle, but also of that of men, dogs, horses, and probably other animals. Baumann has succeeded in producing carbolic acid out of fibrin by a protracted digestion with the pancreatic glandular substance, and Neucki and Brieger have found that it is constantly present in normal human fæces. It is probable, as asserted by Salkowski, that the acid is formed in the organism as a late product of the pancreatic digestion. Its elimination by the urine is enormously increased in ileus (100-fold, Salkowski), and diminished in anæmia, phthisis, scorbutus, scrofula, and cancer (Brieger, *Med. Centralb.*, 1878, 545). Hoppe-Seyler's theory that the acid does not pre-exist in the urine, but is produced out of indican during the processes employed for procuring it, is not tenable. It appears to be formed from the albuminous substances, tyrosin being an intermediate product, since Brieger has found that the taking of large doses of tyrosin is followed, not by elimination of tyrosin, but by a great increase of the urinary phenol. In this connection it is interesting to note that Christiani has found in the urine of chickens fed upon vegetable diet no phenol, but a notable amount was present when a flesh diet was allowed. In a series of experiments Dr. I. Munk obtained three grammes as the average excretion of twenty-four hours from a horse.

The mode of elimination varies according to the amount of carbolic acid in the blood. When large quantities are administered some of it escapes unchanged, for in a fatal case of poisoning Patrouillard obtained an oily fluid, believed to be pure carbolic acid, by shaking the urine with ether, allowing the mixed fluids to separate, and removing the ethereal layer and evaporating. When only in the normal amount in the system, or when administered only in therapeutic doses, the researches of Baumann, which have been substantially confirmed, show that the carbolic acid is changed into a peculiar sulphocarbolic acid, a sort of ether-sulph-acid, having the formula of $C_6H_5O.SO_2.OH$,

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which finally unites with potash and is eliminated as a sulphocarbolate.

Probably when present only in normal proportion, and certainly when taken in toxic amount, carbolic acid is partially burnt up in the body. The black coloring-matter of the characteristic urine of carbolic acid poisoning is an educt from carbolic acid, formed by its partial oxidation. Hauxmann has proved that it is not altered hæmatin or any fixed coloring-principle, by finding that the urine is cleared up by heating after the addition of an acid; and his conclusion is corroborated by the observation of Dr. Stevenson, of Guy's Hospital, who found that the black urine does not contain more than a normal proportion of iron. When carbolic acid is oxidized outside of the body, as by the action of the permanganate of potassium, oxalic acid is formed; and Salkowski has found that when phenic acid is given to animals oxalic acid appears in the urine. Other observers have, however, failed to find these oxalates. Fr. Schaffer, A. Uerbach, and E. Baumann and C. Preusse found that the phenol was at least in part oxidized into hydrochinion, and partly into a greenish-black substance upon which the coloring of the urine seems to depend. The recent researches of L. Brieger seem to prove that when carbolic acid is taken in not too large quantities a portion of it unites with sulphuric acid, and a portion of it is converted into various colored oxidation products, some of which are very poisonous. According to the experiments of W. Kochs, this change occurs in the large abdominal glandular viscera.

Schmiedeberg has recently come to the conclusion that no phenol is oxidized in the body, but that it is all eliminated in combination with sulphuric acid, or to a less extent with glyco-uronic acid. The evidence is, however, too strong against this view, and the true conclusion seems to be that when carbolic acid is taken in great excess it is in part eliminated as carbolic acid, and that the remainder of it (the whole of it when taken in moderate amount) in part escapes in combination with an alkali as sulphocarbolic and glyco-uronic acid and is in part oxidized in the system.

These facts being understood, it is perfectly plain why the sulphates are so valuable in phenol-poisoning: they simply find the acid, wherever it may be, ready to leave everything for their embrace; and the joined lovers, a now harmless couple, waltz out of the system in an excess of joy at the consummation of their natural union.

A PHYSIOLOGICAL LABORATORY.

WE have all studied physiology,—more or less; some of us, as students, heard *résumés* of what lore Kirke had given to the world, to which were added a few hints of new discoveries; while others, more fortunate, saw at least a few absolute demonstrations of the more important truths of animal life. One great difficulty under which American physiology has labored, in comparison with the study of it in Europe, has been, and is, that our institutions are private, and while we never for a moment allow inferiority in American medical workers, yet our laboratories are generally fitted almost entirely at the expense of the professors charged with their direction, and, as these are usually more or less occupied with practice, they have not the opportunity to devote their entire time to scientific work, and so are often unable to undertake researches which require continuous attention and personal presence for days at a time. The old régime is, however, gradually changing, and the alterations which have taken place in the last decade for the improvement of medical teaching, the tendency to concentration in some of the older universities, and the fair start promised in at least one of the new institutions, offer a brilliant prospect for the rapid advance of Americans in the grade of scientific standing. A short description of one of the best-fitted physiological laboratories of Europe may be of interest to those readers of the *Medical Times* who desire to see the advancement of our own work.

The physiological laboratory of the Veterinary School at Lyons, France, is under the charge of the director of the school, M. Chauveau, who is also Professor of Experimental Medicine in the Faculty of Medicine at Lyons. The students of medicine come to the veterinary school for many of their lectures, as the best part of the instruments for demonstration are established in the latter. On entering the veterinary school, which was once an old monastery on the border of the Saône, one crosses first the court for clinics, then the court for the hospitals, and arrives in a third, which is entirely devoted to anatomy

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and physiology. At the entrance are stables containing a flock of sheep, a few cattle, horses, and donkeys, and innumerable guinea-pigs, dogs, and rabbits, which are waiting their turn to aid in the increase of medical knowledge. The main building contains several rooms; around these on all sides are high counters, over which gas- and water-pipes run, so that instruments requiring their use can be employed at any point. The rooms to the right are mainly devoted to the instruments for graphic experiments. There are several ordinary "Mareys," and three large instruments, of which *two* have double cylinders of about three and a half feet circumference, and *one* is provided with a continuous roll of the blackened paper, so as to obtain tracings during any length of time: all these are supplied with sets of four needles for taking the thoracic and abdominal respiration, the pulse and the blood-pressure, or any combination of four actions, simultaneously. On a balcony, over one room, is a complete collection of electrical apparatus and smaller instruments. Iron braces and pulleys are attached to the ceiling and walls, for the control of the larger animals during experiments. A steam-engine, running night and day, supplies electricity when wanted, furnishes equable heat, pumps the bellows for artificial respiration, and runs the graphic instruments in connection with a clock and electric wire: so that at the side of all tracings is a tracing which marks each second of time. To the left are rooms for the experiments in "cultures" of microbes. A series of three large stoves are kept constantly at 35° C., 40° C., and 43° C., as these are the temperatures most used for breeding and preserving the cultures. A number more of stoves of all sizes can be heated to any degree for sterilizing and attenuating the fluids and their contents. Next come a series of mercury pumps for producing vacuum and analyzing gases, Pettenkofer boxes, apparatus for analyzing air, etc. A number of these instruments are new and peculiar to this laboratory; by previously arranged tests and schedules they greatly simplify many of the older methods. A complete description of them will be published in a work to appear shortly. In a building adjacent, M. Chauveau has just completed a Pettenkofer box of iron and glass,—with every apparatus for the analysis of the air of entrance and of exit,—in which can be placed a horse, a dozen sheep, or a bed with every convenience for a man, well or sick. Mechanical contrivances allow food and water to be given or withdrawn without opening the box, and tubes and troughs collect the excretions. The large lecture-amphitheatre is connected with the laboratory by wires for electricity, and there the circulation, respiration, and action of the nerves are shown on the horse and donkey so that a hundred students can see the results clearly, instead of having them monopolized by a pair of assistants, as often happens. The amphitheatre can be darkened, and with an electric light the movement of the needles of the graphic instruments is projected on a screen so as to appear six feet in length, and the spectator sees distinctly the tracings, in an outline which does not permit him to overlook the smaller deviations. Two years ago they endeavored to take M. Chauveau to Paris to fill the chair left vacant by Claude Bernard, but he preferred to remain in his own laboratory and under the Minister of Agriculture (to which the veterinary schools are attached), and make his occasional visits to Paris to give to the Academy of Sciences the result of his own work and control experiments. M. Chauveau only went through the formality of becoming a doctor of (human) medicine a few years ago in order to satisfy a technicality in accepting a chair in the Faculty of Medicine at Lyons; but he had long been an honorary member of the Academies of Medicine of Paris, London, Brussels, and numerous smaller places. M. Arloing, the Professor of Comparative Anatomy, the discoverer of the vibrion of symptomatic anthrax, and a laureate of the Academy of Science, controls the work of half of the laboratory, while M. Kaufmann, the chief of service, and temporary assistants, are constantly occupied in carrying out the researches of MM. Chauveau and Arloing, or are engaged in their own work, which the generous opportunities afforded by the laboratory and the kind advice of M. Chauveau render much easier and much more agreeable than the scientific work of any laboratory that I have ever known.

RUSH SHIPPEN HUIDEKOPER, M.D.

A BILL has been introduced into the legislature of Michigan to add a department of "eclectic medicine" to the State University. Why not spiritual medicine?

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NOTES FROM SPECIAL CORRESPONDENTS.

CHICAGO.

YOUR correspondent has had an opportunity to observe personally the practical working of the law in this State for the commitment of the insane. The law in force in Illinois for a number of years past requires a friend or other person to enter at the office of the clerk of the county court a sworn statement to the effect that the person therein named is a lunatic and an improper person to be at large. Upon this statement the clerk issues a warrant for the arrest of the insane person, who is duly brought before the court and a jury of six men, where he is placed upon trial in the same manner as though a criminal, and, in his presence, each witness is examined and the whole condition of the sick man is discussed,—the wife, the sister, or, it may be, the child, having to testify under the most painful circumstances, while the curious look on and the newspaper reporters take notes for the edification of their world of readers and the free advertisement of the painful social ills of people who would have it quite otherwise.

The jury is not always selected with a view to the intelligence of its members, and it is in consequence often difficult to secure the commission of a patient urgently needing treatment in an institution, simply because the patient may not manifest some of the grosser evidences of insanity in the presence of the court and jurors. In the event of failure the same routine has to be gone through at another sitting of the court, which is convened but once each week.

This law was enacted to appease the popular clamor for the protection of persons who might be unjustly committed to an insane asylum. The law is offensive, and is often complained of by those whom it most intimately concerns. It is to be hoped that the proper authorities will, at some early day, substitute some more acceptable mode of procedure.

Our Training School for Nurses is now firmly established, and the first examination of pupils will take place this month. The board of examiners will be composed of regular and homœopathic physicians.

Nurses will be sent out for private service at three dollars per day, or fifteen dollars per week. The school now has thirteen hundred and fifty-five dollars with which to commence the construction of a suitable building, and an additional subscription-list upon which the committee can draw.

The County Medical Board has been urging the necessity for the appointment of two additional internes for the County Hospital, but the commissioners, who are non-medical, have ignored the request.

April 11, 1883.

PROCEEDINGS OF SOCIETIES.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

A CONVERSATIONAL meeting of the Society was held at the hall of the Society, northeast corner of Thirteenth and Locust Streets, on March 14, 1883. Dr. James W. Walk read a paper on "Medical Charities" (see page 493).

DISCUSSION ON THE ABUSE OF MEDICAL CHARITIES.

The President stated that discussion of the following points was especially desired:

Are dispensaries as at present conducted a benefit—1. To physicians, either in experience or reputation? 2. To patients, either physically or socially?

If dispensaries as now conducted are injurious to the profession and to the community, what are the remedies?

Dr. Mills, in opening the discussion, said he was in accord with the paper in its condemnation of affording relief indiscriminately, but could not assent to some of the broad assertions which had been made, notably the statement that the whole dispensary system was "cheap, ill-considered, and pernicious." The dispensary system had been of incalculable benefit to medical men. Information is afforded by it which cannot be obtained in any other way, for it enables the clinician to mass cases and study them successfully. The benefit is most marked when, as is now done in most college dispensaries, the service is specialized, so that thorough attention can be given to individual cases. He had himself often spent hours on a single case. One secret of a successful dispensary is this proper division of the service. While it is true that medical men have risen to high standing without the advantage of dispensary work, it is also true that many have gained their reputations very largely by this means: such instances are well known to all present. As to the benefit received by patients no doubt ought to exist. He had seen cases of eye-disease, for instance, in which loss of sight would undoubtedly have been the result if the patients had not had the opportunity of securing gratuitous treatment without delay. The provident system, which had been alluded to favorably in the paper, will possibly open the door to abuses as serious as those it was supposed to abate, for if a small fee of ten or twenty cents is substituted for free treatment, many persons will pay this fee who can afford to pay a fair price, who are too proud to ask for gratuitous advice. One of the most serious evils in dispensary service is the loose system of receiving patients, who come to the outdoor department of a hospital and college dispensary and go into any room in the building they please. The system ought to be so

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arranged that an authoritative officer should register every patient and make such inquiries as are necessary to determine the fitness of the patient to receive the treatment and the special service to which the case belongs.

Dr. Stewart read a printed announcement or circular of the Provident Medical Association of Philadelphia, recently organized, modelled after one of the "provident" dispensaries of London. These institutions are under the control of non-medical gentlemen of reputation. The physicians employed are salaried, and the idea is to limit the benefits of the system to persons of limited means.

Dr. Cohen said that the deserving poor *deserve* the gratuitous treatment which is afforded them at the dispensaries. He thought that the statistics which had been given were considerably in excess of the proportionate number of the entire population, inasmuch as the same individuals often go the rounds of the various dispensaries, and many cases go to different departments in the same dispensary, and thus many of the entries are duplicated. In his own dispensary practice he had made it a custom to inquire into any case in which the patient seemed able to pay, and to refuse to treat those who could do so and came merely to save paying a fee to their physician. As an instance of what patients are often willing to do in these matters, he states that he had lately been handed by one of his assistants a contribution of three dollars from a patient who came to the dispensary and declined to accept gratuitous services. Many applicants are willing to pay sufficient to render this sort of service partly self-supporting.

The dispensary system has been of great value to physicians. Many of our distinguished men have, as Dr. Mills remarked, made their first step in reputation by their connection with the system. It is when a physician has just graduated that he finds leisure to study cases and to publish results, and the dispensary affords the best, if not the sole, opportunity for such study at such times. A good deal of the wrong in the system comes from the competition among the different institutions. They are all anxious to have a plentiful supply of patients, and are unwilling to be exacting as to the circumstances of those that come. He had on one occasion seen at the clinic of Prof. S. D. Gross a man who paid personal taxes upon an annual income of more than ten thousand dollars. Even men who subscribe to hospital funds sometimes present themselves for free treatment. At the German Hospital in this city printed forms are used stating that the person signing is not able to pay for medicine, and also acknowledging that board, advice, and medicine have been furnished gratuitously. Patients are required to sign these forms, which are then put on file. He had seen in Europe a system in which each patient was required to inform the registrar of the sources and amount of his income, and subscribe a proportionate sum during the term of his dispensary treatment: so that the institutions were thereby rendered in great measure self-supporting. Such a system might be of advantage here, for he was convinced that many applicants would willingly pay small fees for services rendered rather than receive gratuitous attention, and prefer to do so were the opportunity offered.

Dr. Risley said that, after a somewhat extended experience in dispensary work, he was convinced that the abuse of medical charities was a real evil, which needed correction.

How to correct it, however, was a difficult problem to solve. The physician conducting the service was forced to depend upon the answer made to his inquiries regarding the ability of the applicant to pay for medical treatment. The answers given might be truthful or false, but he could not constitute himself a vigilance committee to investigate the matter. It had always been the rule at the public service with which he was connected to inquire in every doubtful case whether the individual was compelled to seek charitable treatment. Various answers were given. Some persons came, drawn simply by the reputation of the institution, thinking they would receive better treatment than at the hands of their own physician, but were able to pay. In all such cases treatment was refused. The personal appearance and dress was practically the only criterion one had to judge of the probable circumstances of the applicant; and this was often misleading. As an illustration of this, he mentioned the case of a young woman of ladylike bearing, well and tastefully attired, who promptly answered, No, she did not have to ask for charity. When she was refused advice she was greatly incensed, and frankly said that she had been brought by Miss ——, who had been under treatment for several months, and was much better able to pay than she, since Miss ——'s father owned the mills in which her—the refused applicant's—father was employed as superintendent. The mill-owner's daughter chanced to be uncouth and untidy in her appearance, and had, therefore, not been suspected of being an improper case for charitable treatment. So that, while free to acknowledge that the medical charities were to some extent abused, he nevertheless knew that many of the physicians conducting them made an honest effort to prevent it as far as was in their power. The only scheme for its prevention which had ever commended itself to him was the plan similar to that once more suggested this evening by Dr. Mills,—viz., a central agency for registration, which should furnish a certificate of the worthiness of the applicant.

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Dr. J. L. Ludlow thought that the tenor of the debate was that dispensaries should be abolished; but he does not agree with this idea. Properly conducted, and extended only to the deserving, the dispensary system is an excellent one; and, as Dr. Mills has said, some of our greatest physicians owe their reputation to work begun in the dispensaries. The best place for clinical study is undoubtedly the hospitals; the next best is in the dispensaries. In the former we can give food without medicine, and without food or good food we can often do very little. In the latter we can only give medicine, with bad hygienic surroundings and bad food. A large number of physicians, and these by no means the dullest, fail to secure positions either in hospital or dispensary; these are the prizes for the young graduates, and are of inestimable value.

People will dress poorly in order to be thought entitled to the charity of a dispensary. The dispensary service exists in two forms,—one the plan of the old Philadelphia Dispensary, a purely public charity, the other as an adjunct to the colleges. Between those of the latter kind competition exists; they are glad to get cases, and will not inquire too closely into the claims of those who present themselves for treatment. All the dispensaries should be made a part of the system of organized charitable relief, and no one should be permitted to use them who can pay a physician. A great benefit would be conferred not only upon the community, but also upon those who would pauperize themselves to impose on doctors and rob the charitable.

Dr. Kirkpatrick stated that he was connected with the charity organization, and also with a dispensary. He thought that Dr. Ludlow had brought out the true remedy. As an example of the good that may be done, he referred to a dispensary in which eighty-six cases were investigated and forty-three were found willing to pay or had given false addresses, leaving only the remaining forty-three as actually deserving of charitable relief. Such inquiries, however, must be made under a regular system. It is unwise to trust the patients' statements.

Dr. Leffmann suggested that some of those who go to free clinics, especially college clinics, do so in order to get the advantages of the consultation-advice of the distinguished clinicians who are connected with the colleges. These persons are willing to pay, and do pay the ordinary visiting-fee, but wish to avoid the higher consultation-fee. It is also true that the attendance at dispensaries is increased by persons whose object is to get prescriptions to be used for the purpose of getting money from the charitably disposed on the pretence that they cannot get the prescriptions put up. He mentioned instances within his own knowledge of both these classes.

Dr. Jurist said that the gentleman who had been referred to by Dr. Cohen as giving three dollars to the clinic at which he was treated was by no means a poor man, as he had an income of about fifteen hundred dollars a year.

Dr. Atkinson thought that if any one of the proposed plans is carried out fully it will be successful. He considered Dr. Ludlow's plan very good. It may be possible to restrict the free treatment to those who hold a certificate from a duly-qualified district-visitor. By proper inquiries into the conditions of patients he had reduced very materially a dispensary service with which he was connected. Many patients will be quite willing to desist from coming to dispensaries when they are given the addresses of physicians who are moderate in their charges. He urged the members to consider, as a true medical charity, the importance of the Mutual Medical Aid Society of Philadelphia.

Dr. Seltzer referred to the statistics given by Dr. Walk, from which it appears that one-fifth of the population of the city seek gratuitous relief. These figures seemed remarkable. He had recently conversed with a medical friend practising in a well-to-do rural neighborhood, and learned from him that in good times about one-fifth of his patients did not pay, while in bad times one-quarter did not. Physicians of reputation often discard cases because unable to pay full fees, and these cases go to a dispensary. It would be better that such cases should go to some of the younger practitioners, to whom a reduced fee would often be acceptable, at least better than losing it altogether.

Dr. Nebinger said that the poor we will always have with us. They have claims on us whether sick or well, and the individual who ministers most largely to their wants will receive the largest reward. He is in full sympathy with all institutions of charitable character, and if abuses do occur in them it is not sufficient reason to condemn them entirely. They are liable to errors and improprieties, like other works of mortals, and, while we may seek to correct the errors, we will hold on to that which is good. In an institution with which he is connected as medical director, sixty per cent. of the cases are treated entirely gratuitously, and if he is to judge other institutions by what he knows of this one, the evil is not very serious and does not call for interference. In his opinion, if these institutions are conducted with proper attention no serious objection to them will arise. Some of them are, however, carried on for the benefit of inside parties. He referred to a case of marked overcharge in a prescription, under circumstances strongly suggestive of collusion between the apothecary and the dispensary physician.

Dr. Walk, in closing the discussion, said that harder things against dispensaries had been said in the course of the discussion than in his paper. He did not advance the view

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that dispensaries could not be properly conducted and made a means of good. The main evil is the bad public sentiment developed. Medicine is not capable of being carried on as a purely philanthropic work. The curing of disease is a matter of money. The exact figures are not important; but the fact is that, under the present system, one hundred thousand persons in Philadelphia are taught that they can get along without paying for their doctor, and their success in this endeavor encourages others to try the same plan. He does not advocate the contribution-box system; and the "provident" scheme is still on trial. It is the wholesale cheapening of medical service that is the evil. It amounts to saying to the community that if people do not wish to pay their doctors they need not do so.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

STATED MEETING, THURSDAY, April 5, 1883.

The President, DR. R. A. CLEEMANN, in the chair.

DR. W. GOODELL exhibited some

CALCAREOUS PARTICLES PASSED PER VAGINAM.

The previous history had been that of menorrhagia, and multiple fibroids were found in the womb. One of these fibroids had evidently taken on calcareous degeneration, and had subsequently broken down and discharged these fragments into the uterine cavity. He stated that these particles were not true bone, but merely the product of a disorderly deposit of lime, which possessed none of the osseous elements, not even cartilage-corpuscles. This calcareous degeneration tends to cure the disease by breaking off the vascular filaments of attachment and lessening the nutrition of the fibroid. In one instance, the specimen of which is now in the museum of the University of Pennsylvania, he had seen three fibroids wholly converted into stone. These stones were, however, very light, and not like those of the bladder. It was the expulsion per vaginam of these uterine calculi which had greatly puzzled the older anatomists.

Dr. GOODELL also exhibited two calculi, and related the following histories of two cases of

STONE IN THE FEMALE BLADDER ASSOCIATED WITH FISTULOUS CONNECTION WITH THE BOWELS.

The first case was that of a patient of Dr. C. A. McCall, who sent her to him in October, 1881. For the preceding four years she had suffered very much from vesical tenesmus. She frequently broke wind per urethram, and often passed through the same channel the seeds of raspberries, of tomatoes, and of pears. A year before Dr. Goodell saw her she had voided a great deal of her urine per rectum for several weeks. Dr. Goodell detected two stones in the bladder and removed them. At once all the symptoms of fistulous connection between the bladder and the bowels disappeared, and the patient got well. This rapid recovery led him to think that there had not existed any fæcal fistula, but that the vesical tenesmus was so great as to cause a rectal tenesmus, which was masked by the former, and that the seeds and wind were voided per rectum unconsciously by the woman when attempting to empty the bladder. But he had been led to change his views by the following case, which he had seen with Dr. William Corson, and which Dr. Ellwood Corson was kind enough to report for him. Misled by the first case, Dr. Goodell was not at first disposed to admit the existence of a fæcal fistula, but from the subsequent history of the case there can be no doubt of it. In this case he believed that a pelvic abscess had burst into the bladder, and also into the rectum or small intestines, which had established the communication between the two viscera. Like the first case, as soon as the calculus was removed the fistulous tract closed and the patient got well. "Mrs. R., American, aged 50 years, the mother of five children. For three or four years prior to November, 1881, she was troubled occasionally by the passage of small calculi, but her health was reasonably good, with the exception of backache and an almost constant pain in the right iliac region. She often expressed her belief that there was something growing in the right side. There was no tumefaction in that region, and her opinion was based on the pain and distress she felt. She never applied to her physician for relief of this suffering. She was also troubled with constipation. In November, 1881, she made a visit to the country, and took a long walk. On her return home she had a constant desire to urinate, and she then noticed for the first time that her urine had an unnatural color and a very unpleasant odor. The quantity passed was not excessive. This condition continued for five or six days, when there occurred a sudden gush from the bladder of a very offensive mixture of pus and urine, accompanied by great pain and straining. Her pain and distress became so great, and was so augmented by being on her feet, that she was compelled to remain in bed." After the free discharge occurred, the pain in the right iliac region ceased, and she has never had any return of it. As she was troubled with constipation, she was directed to eat stewed prunes, and she soon noticed that the prune-skins came from the bladder, as did other articles of food, along with the urine. Every day she was troubled with the escape of gas through the urethra, and this gave her as much pain as the passage of solid

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matter. She says that she occasionally passed urine through the rectum. She became greatly emaciated, and was but partly relieved of her suffering by the constant use of morphia. Until January 20, 1882, she was under the care of homœopathic physicians. On that date Dr. William Corson was called to the case. February 10, Dr. William Goodell saw her and diagnosticated stone in the bladder. February 20 she was etherized and the urethra dilated, and a digital examination proved the existence of a calculus about three-quarters of an inch in diameter, attached to the fundus of the bladder. This was removed by Dr. Ellwood Corson. In attempting to dislodge the calculus it crumbled on slight pressure with the extracting forceps, and proved to be a mass of fæcal matter with a calcareous crust but little thicker than an egg-shell. While she was under the influence of the anæsthetic an attempt was made to wash out the bladder, but, after injecting f℥xii of water and finding that it escaped into the interior of the body and did not remain in the bladder, the washing-out process was discontinued. After she regained partial consciousness and made a strong straining effort, the injection came away through the urethra. As there were some doubts expressed as to the possibility of there being an opening from the bowels to the bladder, she was induced to eat a few stewed figs, and the seeds were *seen* to come from the urethra. On another occasion f℥viii of carmine-colored water was injected into the rectum, and was immediately drawn from the bladder by means of a catheter. After the removal of the calculus it was thought proper to keep the bladder washed out daily with warm injections, and to regulate the bowels with mild aperients, but after persisting in this course of treatment for four days it was abandoned, as it caused her great discomfort and did not improve her condition. Afterwards she was allowed to eat such food as the system craved, care being taken to select such articles as would not leave an irritating residuum. She rapidly improved, and since April, 1882, has had no trouble with her bladder. If she eats acid fruits or drinks lemonade she has some irritation in passing urine. That there was a fistulous opening from the bladder to the rectum there can be no doubt; and when we take into consideration the fact of an abscess forming somewhere in the right iliac region and opening into the bladder, and that the food passed from the bladder in a semi-digested state, and the absence of a fæcal odor, there is a strong probability that there was also an opening from the small intestines into the bladder.

Dr. J. C. MORRIS had seen two cases of pelvic abscess bursting into the bladder. One case was in the person of a night-nurse at the Episcopal Hospital. A tumor in the lower part of the abdomen first attracted attention. The uterus was drawn up out of reach of the finger when making a vaginal examination; an inflammatory mass could be felt between the uterus and the bladder; every half-hour a mixture of urine and pus was voided per urethram. If a catheter was passed into the bladder and turned to the right, urine escaped through it; but if it was passed to the left, nearly pure pus passed through it. Examination with the sound showed a large fibroid in the anterior wall of the uterus. This tumor having undergone purulent degeneration, and a fistulous opening being established into the bladder, the pus escaped through the bladder. A galvanic stem-pessary five and a half inches long was introduced into the uterus, and was finally successful in effecting its reduction to the normal size. This woman died of fibroid phthisis, and at the post-mortem examination the uterus was found but slightly enlarged, and the fistula into the bladder was not seen, but a communication from the small intestine into the bladder was discovered.

Dr. WILLIAM H. PARISH had seen one case of fistulous communication between the bladder, vagina, and small intestines, resulting from an attempted abortion and consequent cellulitis. After long-continued pelvic symptoms, food commenced to pass through the bladder and the anterior and upper portion of the vagina. Water injected into the vagina passed into the bladder, but a sound could not be made to follow it. The food which passed through the fistula was incompletely digested.

Dr. ELLIOTT RICHARDSON read a

REPORT ON RESULTS OF POST-MORTEM EXAMINATION OF THE BODY OF LINA EARL.

This woman was operated upon September 22, 1880, for removal of a living child from the uterus by Cæsarean section, as modified by Porro and Müller. A report of the case was published in the *American Journal of the Medical Sciences* for January, 1881. The immediate results of the operation were in every way favorable. The child was living, and the mother made a speedy recovery.

She died in New York City on February 24, 1883, two years and five months after the operation. She had been for two years previous to her death at times an invalid, and was under my care occasionally for the treatment of attacks of acute rheumatism, anæmia, etc., to which her life of hardship and exposure as an exhibiting curiosity rendered her peculiarly liable. The more recent symptoms which appeared during the last illness I did not witness, but learned were attributable to defective action of the kidneys. At the post-mortem examination, made about 9 P.M. on February 24, ten hours after death, there were present Drs. Satterthwaite and Hegeman, of New York, and myself.

Inspection of the body showed the long bones of the extremities to be deformed as in rachi-

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tis,—deformities which had not been so apparent during life. General anasarca was present. On the surface of the abdomen a cicatrix was observed, extending from a point about one and a half inches above the umbilicus to within about three-quarters of an inch of the symphysis pubis. This cicatrix was the remains of the abdominal incision made at the time of the operation for her delivery, and occupied the linea alba directly in the median line, except that at the umbilicus it was deflected to the left. Nearly the whole of that portion of the cicatrix extending between the symphysis pubis and the umbilicus was the site of a large hernia, which, however, did not extend into the latter. This hernia I had seen during the patient's life. It began to appear about six months after the operation, and received no treatment whatever until by its size it became inconvenient; then a bandage or truss was applied, and this she wore constantly until her death. The production and enlargement of the hernia had been greatly favored by the woman's course of life as an exhibitor of herself and child, for the latter she lifted up and held in her arms many times a day, in order to display it to her visitors, even after it had become much too heavy for her to carry.

The body was opened by a long incision from the top of the sternum to the symphysis pubis. This incision was deflected to one side, opposite the cicatrix of the old abdominal wound, in order that the relations of this to the abdominal contents might be more closely observed. The body, as before stated, was anasarcous throughout. Some clear serous fluid was found in the peritoneal cavity, and a good deal in the cavities of the pleuræ and the pericardial sac. I very much regret that I have no data of microscopic appearance of any internal organ or tissue to give. Only the gross lesions which could be detected by the unaided eye in a hasty examination can be given. The heart was not opened, but the left ventricle appeared abnormally large. The lungs were œdematous, and pneumonia of the right side was observed. The spleen was enlarged. The liver presented an appearance of fibrous or "hob-nail" degeneration. The kidneys showed unmistakably the existence of Bright's disease. The abdominal and pelvic cavities gave no evidence of any peritoneal or cellular disease. The hernia was found to be covered by peritoneum and skin, the remaining structures having parted to admit the protrusion of the intestines and peritoneal covering. No adhesions between the cicatrix and subjacent structures could be detected, except at the lower angle of the wound. It was at this point that the stump of the uterus had been fixed, in a manner similar to the disposal of the pedicle in ovariotomy. A fibrous band was found extending from a depression in the abdominal wall at this point to a body consisting of the remains of the uterus.

Dr. Satterthwaite, who examined these specimens, writes me that this body, which occupied nearly the normal position of the cervix uteri, except that it was displaced somewhat anteriorly, presented the following characteristics: "The extreme length of the stump was 4.75 centimetres (1.87 inches); vertical thickness, 2.5 centimetres (1 inch); its breadth, 1.5 centimetres (½ inch). On attempting to pass a uterine probe into the os externum it was found to enter with difficulty, though the cervical canal was capable of admitting a No. 10 (English) sound. The mucous membrane was coated with a deposit of white, thick, gelatinous material, and was intact for a distance of 3.5 centimetres (1¼ inches). No naked-eye evidences of cicatricial tissue were made out at the amputated extremity of the neck."

Examination of the pelvis *in situ* was of much interest to me. Measurement of the superior strait gave for the conjugate diameter 2 inches exactly; transverse diameter, 4¼ inches; oblique diameter, 4⅜ inches. The pelvis was a rachitic one, although the pavilion did not present the wide-spreading alæ or diverging anterior-superior spinous processes of the ilia which are the usual deformities of rachitis in this part of the pelvis. The true pelvis, however, presented highly characteristic deformities. The sacrum was at its upper part dislocated and pressed downward and forward into the pelvic cavity, while the lower extremity, being held by the ligaments to the ischia and pubic bones, caused a sharp bending forward of the last three vertebræ of the sacrum. This deformity implied abnormal softness and pliability of the bone at a time when the individual was of sufficient age to either stand or sit erect, so that it alone is conclusive evidence of rachitis having existed. The normal curvature of the pubic bones was nearly lost, so that they receded from the symphysis in nearly straight lines backward and outward to join the ischiæ and iliæ, the two pubic bones, when viewed from above, forming an abnormal angle at the symphysis. The shape of the superior strait was, therefore, obtusely cordate, deeply indented at its base by the promontory of the sacrum projecting far into it. I was much surprised at the evidences of rachitis, which became more and more conclusive as the examination proceeded, since the history of the patient formally given me was that of excellent health from her birth to the time of the operation in 1880, and we were told by the woman and those who had known her best in early life that she was in her figure an almost exact counterpart of her father. These facts—as I supposed them to be—led me to believe that her shape was due to arrested growth, and not to rachitis.

It will be of interest to know that the child of this woman is now living, that he is well developed and presents no deformity, nor

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any symptom of rachitis. He is of fair size for his age.

In closing, I would draw the following conclusions from the examination:

1st. That the deformity of pelvis and extremities was due to rachitis.

2d. That the operation had nothing to do with the patient's death.

3d. That the operation caused the patient no inconvenience, except from the hernia, which would either not have become developed, or at most would have been small, had it not been for the exposure of the woman to unusual strain and her total neglect to resort to any treatment until the hernia became large.

4th. That success, in so far as the woman was concerned, would have been possible, and even probable with diameters so large, if embryotomy had been resorted to in this case; but the operation would still have been dangerous, and the child would necessarily have perished.

Dr. R. P. HARRIS remarked that of five Porro operations in this country four have been fatal. This is the first successful operation in which a post-mortem examination has been obtained after entire recovery.

In reply to Dr. A. H. Smith, Dr. Richardson stated that no trace of a fistulous opening between the stump of the uterus and the abdominal wall existed at the time of death.

Dr. B. F. BAER read the history of a case of

SUPPURATING CYST OF THE BROAD LIGAMENT WHICH HAD PERFORATED THE BLADDER,

and exhibited the specimens removed by laparotomy. (The case will be published entire in the *American Journal of Obstetrics*.) The characteristic points were chills, exhaustion, anorexia, tenderness throughout the lower abdomen, and a small, painful tumor in the left iliac region, with great irritability of the bladder. Pulse 120, temperature 100° to 102°. The tumor extended down between the bladder and uterus, and the latter was retroverted. Douglas's cul-de-sac was occupied by a thin-walled fluctuating cyst about the size of a large orange. The uterus could be moved slightly from side to side. The anterior tumor rested on the bladder and was adherent to it. The history showed a slowly-growing cyst with purulent contents, commencing about three years before, when the first chills and a mild septicæmic fever had occurred. Gradual emaciation had been progressive since that time. Tympanitic resonance of the tumor gave evidence of decomposition with evolution of gas. When the catheter was passed before operating, several ounces of very fetid pus flowed through it, showing a spontaneous rupture of the cyst into the bladder. The cyst was found adherent to the abdominal wall and to the bladder, but not to the intestines or uterus. The cyst was aspirated and removed by laparotomy. The pedicle, consisting of broad ligament and Fallopian tube, to which the left ovary was adherent, was transfixed and ligated. The cyst in Douglas's pouch arose from the opposite broad ligament; it had formed no adhesions, and was removed without evacuation of its contents. The ovary and Fallopian tube were healthy, and were not removed. The aperture in the bladder through which the contents of the cyst had escaped was valvular, and was closed by the compression furnished by the external dressings. The patient died from exhaustion soon after the close of the operation. Dr. Baer introduced cases from Drs. W. L. Atlee, Peaslee, Keith, Geo. F. French, and Goodell to prove the correctness of the principles upon which he operated.

Dr. W. H. PARISH thought Dr. Baer's rules safe and sound. He had removed a suppurating cyst with anterior adhesions. An experienced operator who was present recommended delay, but, feeling sure of the correctness of his own principles, he removed the cyst, and the patient recovered. In another case, in which a fistulous opening discharging pus existed, suppurative peritonitis was diagnosticated, but, after death from septicæmia, a post-mortem examination revealed a suppurating cyst of the ovary.

NEW YORK ACADEMY OF MEDICINE.

A STATED meeting was held April 5, 1883, FORDYCE BARKER, M.D., LL.D., President, in the chair.

Dr. E. L KEYES read a memoir on the late Dr. William H. Van Buren, after which resolutions upon his death, offered by Dr. Austin Flint, seconded by Dr. L. A. Sayre and Dr. A. C. Post, were unanimously adopted.

Dr. BEVERLY ROBINSON then read the scientific paper of the evening, entitled "*A Clinical Study of Caffein and Convallaria Majalis as Cardiac Tonics*."

The author first briefly referred to the mode of action of other cardiac stimulants than those which were to receive special consideration in the paper, such as digitalis, ammonia, nux vomica, belladonna, etc. In considering caffein and convallaria majalis separately, their physiological and therapeutical action as recorded in recent medical literature was reviewed, and the author then gave the clinical history of a number of cases under his own observation, with conclusions drawn therefrom respecting the value of these two drugs as cardiac tonics. As compared with digitalis, the chief of all cardiac stimulants, caffein possessed certain advantages, as follows: first, it had not the tendency to accumulate in the economy, and hence to occasion poisonous effects; second, it acted with greater rapidity than digitalis, and in certain cases of

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asystole, where life was in immediate danger, this fact might prove one of great value; third, it rarely disagreed with the stomach, or caused symptoms of dyspepsia. Its disadvantage was that in certain instances it stimulated the brain and caused wakefulness. To be effective, caffein must be given in relatively large doses from the beginning. In order to show any elective action, six grains a day was required, and the quantity might be increased up to twenty and even to thirty-five grains a day under exceptional circumstances. The ordinary preparations of the drug were not suitable for hypodermic use.

The conclusions with regard to the action of convallaria were drawn from detailed clinical notes of fourteen cases in which the drug was administered, and were as follows: first, that in it we have an efficient cardiac tonic; second, that its direct effects were less marked than those of caffein; third, that when the medicine was rejected by the stomach it was probably due to renal disease; fourth, cumulative effects did not occur, at least during its use for ten days or more; fifth, that digitalis was the more efficient diuretic in dropsical affections.

DISCUSSION.

The paper being open for discussion, THE PRESIDENT said there was one point, by way of inquiry, to which he would like to call the attention of the author and those present, which had been suggested by the following cases. The first case was that of a gentleman whom he was called to see at one of our hotels five or six weeks ago. He was a man of wealth, and had been actively engaged in business until a few weeks before, when his health began to fail without notable active disease, except general failure of nerve-power, and loss of appetite and strength. He had consulted several eminent physicians in neighboring cities. While here he had an attack of extreme weakness, shortness of breath, a feeling of impending suffocation, and of too great heart-action, although the heart-power in fact was not increased. The complexion was ashy, and the patient was anxious and restless. Physical examination revealed no evidence of disease of the heart or lungs. The urine had been examined by competent men, and no sign of renal disease had been found. He had sustained a strong moral shock from a family affliction. The fluid extract of convallaria, six drops every three hours, was given. That evening he felt much better, and the next day he said he was better than he had been for two months. At his second visit Dr. Barker found him much improved; the breathing was easier, and he was much more cheerful. Two weeks afterwards, the patient having returned home, a letter was received from his physician, asking what had been prescribed, as the medicine had all been used, and the patient desired to have it renewed, as he had already received so much benefit from it.

The second case was that of a widow of a prominent physician, who had suffered from a severe attack of bronchitis, accompanied by violent cough. The bronchitis had subsided, but was followed by great nervous prostration and apprehension. She complained of difficulty in breathing, and appeared pale and nervous. The action of the heart was not characterized by great feebleness, nor was it much quickened, although she complained of palpitation. In her case the convallaria seemed to effect a greater change in her whole condition within two days than he had ever seen from any medicine under similar circumstances.

The question which had suggested itself to him was whether a part of the influence which had been ascribed to convallaria as a cardiac tonic was not due to its action as a vaso-motor stimulant.

Dr. KINNICUTT said that he had continued observations upon the effects of convallaria, begun by Dr. Robinson, in the St. Luke's Hospital, and in most respects the results which he had obtained from the drug coincided with those obtained by the author of the paper. He could not speak positively with regard to its having a weak diuretic power. It seemed to him that further experimental observation was needed in order to determine accurately the *modus operandi* of the drug. Dr. Ott's experiments would seem to demonstrate that the slowing of the heart's action which had been observed was not dependent upon an excitation of the cardio-inhibitory apparatus, and yet he, as well as certain foreign observers, had obtained marked benefit from convallaria in cases of palpitation dependent upon the vagus.

Dr. A. A. SMITH had used convallaria in a large number of cases, and his experience, as far as the diuretic power of the drug was concerned, was in accordance with that expressed by Dr. Robinson. He had used it in cardiac affections, and, from what had been reported with regard to its physiological action, he was not disappointed that it had not done well in some cases. It had seemed to him that in cases of cardiac hypertrophy it was not indicated, and yet he had used it as it had been recommended for the dyspnœa which sometimes occurred in such cases, and also in cases of chronic renal disease accompanied by such a condition of the heart, and he had found, as he had expected to find from the physiological action of the drug, that the symptoms were aggravated. In many cases of cardiac dilatation with dyspnœa it seemed to answer a very good purpose, but he was not yet prepared to give up digitalis and use convallaria. He believed, however, that in properly-selected cases convallaria would produce better results than digitalis. He would be very glad to give a good guide by which it could be selected in preference, but

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he did not yet feel prepared to do so. He could not accept Ott's views with regard to the action of the drug upon the pneumogastric.

It had occurred to him that good results might be obtained from convallaria in pulmonary œdema, particularly in connection with pneumonia, and, having become dissatisfied with the results of the ordinary treatment with digitalis and whiskey, and the application of dry cups, in February last, in his service in Bellevue Hospital, three well-marked cases of pneumonia attended with pulmonary œdema were treated by hypodermic injections of ten minims of the fluid extract of the root of convallaria in connection with one two-hundredth of a grain of sulphate of atropin, and in each case most marked relief followed, and all the patients recovered. In a fourth case, in which there was also renal disease, the patient died. It was to be regretted that the convallaria had not been employed singly, as he had before obtained good results from the hypodermic injection of atropin alone in such cases. The benefit from the two drugs combined, however, was greater. He did not believe that convallaria acted as a direct respiratory stimulant, as did belladonna or strychnia; that what effect it might have upon the respiratory system was probably indirect, by its influence upon the circulatory system, unloading the congested organs, and perhaps increasing the quantity of blood to the medulla oblongata.

Dr. ROBINSON, in closing the discussion, said, with regard to the question raised by the President, that he had not observed any clinical facts which had suggested the probability that in convallaria we had a stimulant of the vaso-motor nervous system especially.

Scarlet Fever in Horses.

Dr. GEORGE A. PETERS said that it was known that scarlet fever was prevailing among the horses of this city at the present time, and he moved that a committee of five be appointed to investigate the matter,—to inquire into the sanitary condition of the stables, the means of stamping out the disease, and of prophylaxis.

The motion was adopted, and the President appointed Dr. Peters chairman of the committee.

The Academy then adjourned.

BABY-FARMING.—A law lately passed by the Legislature of the State of New York requires persons who board infants to take out a license, and to be subject to inspection by the officers of societies for the prevention of cruelty to children. The power to grant licenses, which are revocable, is given to the mayor and the Board of Health. Incorporated institutions are excepted from the operation of the law.

REVIEWS AND BOOK NOTICES.

CHRONIC BRONCHITIS, ITS FORMS AND TREATMENT. By J. MILNER FOTHERGILL, M.D. Edin. New York, G. P. Putnam's Sons, 1882.

There is a so-called "dry bronchitis," and there are books upon the disease which partake of the same unfortunate aridity, but by those who have read with increasing interest the works of Dr. Fothergill this, his latest effort, will be gladly welcomed, and its careful study will only tend to raise the author still higher in their estimation.

Dr. Fothergill has succeeded now, as before, in writing a valuable medical treatise which possesses the ease and grace of a work of imagination, and, while some contend that medical literature is best when free from adventitious surroundings, few will be able to finish the book without acknowledging the graceful art with which he has clothed its hard facts and accurate observation. Who can read the introductory pages without seeing with the author's eye the various pictures in which as a setting he displays his subject? The feeble old bronchitic, with his grandchild, sunning himself in the brief glimpses of light which his island climate affords; the wealthy victim in his ancestral hall; the chronic wards of the workhouse and the hospital, in the country, by the sea, in Westmoreland, at Ventnor or Torquay,—everywhere the picture is vivid with the glow of local association, as well as faithful in minutest detail to the medical fact. The book is divided into the "Objective and Subjective Phenomena," "Pathological Relations," "Forms," and "Treatment." The illustrative cases are skilfully told. The pages teem with suggestions of value, but in brief space. We can notice particularly only the section on treatment. The author considers that the first step in treatment is "to teach the patient how to cough." The explanation of one variety of severe chest-pain as due to a rupture of a muscular fibril at the attachment of the abdominal muscles to the ribs is worthy of notice. There is evidently no sympathy with Mr. Pickwick's unfortunate "Don't trouble yourself about the warming-pan" in the author's mind, as he vividly depicts the cough produced by getting into a cold bed, and there are pages of practical advice about clothing, exposure, and the use of alcoholic stimulants. Expectorants he divides into relaxant and stimulant, the former suitable in the acute congestive and dry stage, the latter in the stage of secretion and expectoration. The time has evidently arrived when squill is to be dethroned in the British mind. It has been for many years a much-abused drug, and the popular, and probably imported, idea of squills and paregoric as a panacea for colds has prolonged and intensified the dry

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stage in many a case, and made a simple cold a very formidable affair.

While recognizing the virtues of acetate of ammonia and potassium iodide in producing relaxation, the author strangely ignores the claims of citrate of potash and the soda salts. Tartar emetic in minute doses and ipecac are to be combined with the alkalies; and aconite has proved useful in his hands. While extolling chloroform, he avoids all mention of ether, which, in combination with ipecac or antimony, is of extreme value in cases where there is great oppression with feeble or irregular heart.

In the chronic stages, where the acute accession is past, strychnia is recommended,—in a way which has been urged by the author before: though he seems to underestimate its unpleasant effects, especially when we consider the size of his dose and the advanced age of the majority of sufferers from the disease. The use of atropia, too, as a respiratory stimulant in elderly male bronchitics should be made with caution, else the possessor of an enlarged prostate may be so lulled into urinary ease and forgetfulness that, when he wakes, the bladder may be too distended to empty itself and a very bad condition of things suddenly appear. As a narcotic the author advises bromide of ammonium combined with hyoscyamus as potent and safe when opium or chloral would be deadly and bromide of potassium unsafe. Alcohol also, he says, as a "night-cap" "often achieves the desired end better, and with a minimum of after bad effects." The advice is good,—the English perhaps not so good. Perspiration we are told is most easily induced at the morning-sleep after 6 A.M.

In asthmatic bronchitis the author hints at the value of "Himrod's powder,"—an American secret remedy; but we see no mention of coffee or caffein, though a strong infusion of the former with brandy has often succeeded where other drugs have failed. But space fails to enumerate the many valuable suggestions of this book, which is one which cannot fail to lead to a more intelligent diagnosis and successful management of a disease unfortunately so prevalent that all have an opportunity of proving to their own satisfaction the value of the author's advice.

E. W. W.

PURE ALKALOID OF GELSEMIUM SEMPERVIRENS.—Commercial gelsemium heretofore has not been crystallizable, and did not furnish salts; perhaps it was not of uniform composition. Gerard has obtained it, however, in a crystalline state which yields crystallizable salts. Its formula is $C_{12}H_{14}NO_2$. In its chemical behavior it closely resembles strychnine.—*British Medical Journal*, March 3.

GLEANINGS FROM EXCHANGES.

SYMPTOMS OF RABIES RELIEVED BY CHLORAL.—Dr. Broadbent recently reported to the Clinical Society of London the following case of supposed hydrophobia treated by chloral which recovered. The patient, a boy æt. 12 years, was admitted into St. Mary's Hospital on February 25, 1876, suffering from violent convulsive attacks which had been going on for two days. The paroxysms were ushered in by a loud, deep breath, and there were first momentary rigid extensions of the body, followed by rapid rotatory movements of the head with loud laryngeal sounds, which lasted two or three minutes, after which the boy moaned and complained of pain in the head. These attacks were at once brought on by an attempt to drink, by the sight or sound of falling water, by the contact of a cold object or pressure on the heart, or by light thrown into the eye in attempts at ophthalmoscopic examination. In the intervals the boy was conscious and fairly clear in intellect; his countenance was pale and anxious, the skin clammy, temperature normal, pulse 108, small, weak, and hesitating; respiration sighing. There were frequent extensive jerks of the body and limbs. The idea of hydrophobia had occurred to his parents, but the only dog the boy was known to have played with was alive and well. The boy himself spoke only of the same animal until directly asked if he had ever played with a strange dog, when he said he and some companions had found and shut up a strange dog, and that it had bitten him on the hand, but he had forgotten which. There was found, however, on the fleshy part between the thumb and the finger of the right hand a small scar surrounded by an extensive induration like that of a chancre. After a trial of nitrite of amyl with no good effect, chloral (twenty grains), brandy (one ounce), and beef jelly (two ounces) were given by the bowel every three hours. The boy slept, had only slight occasional spasms, and was soon able to drink milk. On February 28 he was apparently well, and the chloral was suspended; but on the evening of the 29th he had a violent relapse, which continued on March 1. Chloral was again given till March 11, when he had been up and running about the wards for several days. He remained in the hospital till April 2, and was kept under observation for some time longer. When he was taken to the hospital chapel, the first notes of the organ threw him into a state of uncontrollable excitement, with violent throwing about of the arms, and he could not, for a time, bear the sound of barrel-organs. The case was submitted to the Society exactly as it was written out six years before from the notes of Mr. Jackson Garrett, at that time resident medical officer. If the boy had died, there would have been no doubt as to the

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disease being hydrophobia. The symptoms, while not corresponding in all particulars to those seen in some fatal cases, were extremely similar, and the induration round the bite was corroborative evidence. The circumstances excluded emotional excitement as a cause of spurious hydrophobia, and there was nothing in the boy's previous history or character to suggest that he was a likely subject for hysteroepileptic simulation of the disease. Chloral was given partly because it seemed best adapted from its physiological effect to relieve the spasms, partly in the hope that it might rob death from such a disease of part of its horror.—*Medical Press.*

THE ETIOLOGY OF DIPHTHERIA.—Dr. Edward Woakes gives the following as his conclusions after an extended consideration of the subject:

1. Diphtheria is an idiopathic inflammation, the peculiar type of which is imparted by previous exhaustion of sympathetic nerve-force; that the loss in question occurs chiefly in children, in whom the nutritional centres are normally in special activity; and that this exhaustion acknowledges chiefly climatic conditions possessing in themselves no other peculiarity than is implied in the tendency to lower the vital energy of the subjects exposed to them. The patient so circumstanced may be said to exhibit the diphtheritic diathesis. During its continuance exposure to a slight exciting cause, such as a common cold, will suffice to develop a typical attack of diphtheria. Under these circumstances the disease may be said to arise *de novo*.

2. When the diphtheritic process is established, in whatsoever way it may be brought about, the element of contagium is introduced. Though not, perhaps, yet capable of exact histological identification, this is nevertheless a definite tissue-element, forced into rapid growth. In this state it is liable to be thrown off with the detritus of the process, and is capable of continuing its developmental energies, and of exciting a similar action in the corresponding tissues of another subject, if it come in contact with these, providing the subject be already predisposed to exert insufficient inhibitory nerve-power to resist the tissue-demand for such an accession of blood as will suffice to feed the new process to the diphtheritic point. The latter quality resides entirely in the vaso-motor resources of the patient.

3. The explanation of the symptom of sudden death occasionally witnessed in the disease is shown to depend on a similar paresis of the nutrient vessels of the cardiac branches of the vagus as was seen to occasion the local lesions in the throat when affecting the vessels of this area. In consequence of the engorgement of the circulation within the nerve-sheaths, and the jugulation thereby of the contained fibrillæ, the latter are unable to transmit inhibitory impressions to the heart, which accordingly ceases to beat after a continuance of rapid action has exhausted its inherent vitality.—*Lancet.*

SULPHUROUS ACID IN THE TREATMENT OF SCARLATINA MALIGNA.—Dr. Keith Norman MacDonald makes a strong plea for the use of sulphurous acid in conjunction with the ordinary remedies in the treatment of malignant scarlatina. He is of the opinion that to be successful in most cases of scarlatina maligna the treatment must not only be promptly and vigorously but also intelligently applied, and that when so carried out the worst cases need not be despaired of. His plan of treatment is as follows:

"The moment the throat begins to become affected, I administer to a child of five or six years of age 10 minims of the sulphurous acid with a small quantity of glycerin in water every two hours, and I direct the sulphurous acid spray (strength, ʒij–ʒiv to the ounce of water, according to circumstances) to be applied every three hours to the fauces,—about twenty squeezes; and when that can't be done, to hold the instrument about six inches from the mouth, and use it for a few minutes at a time. The acid solution must be recently prepared, as when it is kept for some time in water it takes up an atom of oxygen and becomes sulphuric acid. It is of some importance to bear this in mind, as the efficiency of the acid treatment depends entirely upon its composition."

At the same time he administers a mixture containing from three to five grains of chlorate of potash with seven to ten minims of the tinct. ferri perchlor. in glycerin and water, more or less, according to age, every four hours. He further directs a strong solution of permanganate of potash (ʒij or more to six ounces of water) to be held in readiness for laving the lips and mouth several times in the day to arrest the formation of the dark sordes which collect about these parts: some of it should be swallowed, if possible, each time the lotion is applied, gargling being out of the question in young children.

Sulphur should also be burned in the sick-chamber three times a day at least, by placing flour of sulphur upon red-hot cinders on a shovel and walking about the room with it, thus diffusing the sulphurous acid vapor through the apartment, until the atmosphere becomes a little unpleasant to breathe.

TREATMENT OF DELIRIUM TREMENS.—At the February meeting of the Boston Medico-Psychological Society, Dr. J. B. Ayer read a paper on the treatment of delirium ebriosum, in which he expresses preference for the bromides and chloral given alternately, any depressing effects being guarded against by the use of capsicum and coca. With regard to details of treatment, he pursues the following rational method. When the heart is weak,

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chloral is withheld, but the bromides are given hourly; in other cases the chloral is given on the alternate half-hours, giving as much as ninety grains a day, provided the patient is closely watched.

In a recent case he gave *in five hours* ninety-five grains of chloral (five doses) and one hundred and seventy grains of bromide of potash (five doses); *in twelve hours* one hundred and seventy grains of chloral (nine doses) and two hundred and fifty grains of bromide (ten doses); in twenty-eight hours (at the end of which time patient slept) two hundred and thirty grains of chloral (twelve doses) and three hundred and sixty grains of bromide (eleven doses). Another recent case yielded to bromide of potash (three hundred grains) combined with coca, *without chloral*, in twenty hours. He gives one to two ounces of the fluid extract of coca in twenty-four hours. The combination of coca with bromide rarely nauseates, and is not often objected to. It acts as a good substitute for alcohol, and guards against the weakening effect of bromide. He recommends moving the bowels early, and advises sponge-bathing and massage while the excitement continues. It is advisable to use as little restraint as possible, and he does not insist upon darkening the room. Nor does he try hard to produce sleep, being satisfied if it comes between twelve and thirty hours. The quieted state produced by the chloral and bromide treatment is of nearly as great curative value as sleep itself.

Alcohol should not be administered in the treatment of delirium tremens unless the patient is much debilitated. In most cases it is well to cut off stimulants from the outset, substituting strong beef-tea and other liquid diet at frequent intervals.

PROFESSOR SCHROEDER ON MYOMOTOMY.—A recent number of the *Zeitschrift für Geburtshülfe und Gynäkologie* contains an article by Professor Schroeder, of Berlin, on the extirpation of uterine fibroids, or myomotomy, as he prefers to term it. Although hitherto in this operation better results have, as a rule, followed the extra-peritoneal than the intra-peritoneal treatment of the pedicle, Dr. Schroeder thinks that, as in ovariotomy, the extra-peritoneal method will have to give way to the intra-peritoneal, and that the operation will not have been perfected until a satisfactory method has been devised of securing the pedicle in such a manner that it may with safety be left in the abdomen. The plan which Professor Schroeder has followed is briefly this: First he ligatures, and then divides, the broad ligaments; then he cuts through the uterus, first peritoneum, then muscular tissue, in such a manner as to leave a strip of peritoneum like a frill around the muscular surface of the stump. Then the surfaces of the stump are brought together; first the mucous membrane is united by sutures which are cut short, then the surfaces of muscular tissue are firmly secured in contact by sutures not involving the peritoneum, and finally the projecting ring of peritoneum, which has been left for the purpose, is brought together over the stump. An elastic ligature is put round the cervix before cutting away the uterus, and removed when the suturing of the stump is complete. If the tumor is so situate that it can be removed without opening the uterine cavity, of course the proceeding is simpler. Professor Schroeder has operated sixteen times for uterine myoma, with thirteen recoveries. Of the three deaths, one took place from hemorrhage from the pelvic cellular tissue, one from sepsis, and the other was a case of Martin's operation.—*Medical Times and Gazette.*

THE INTRAVENOUS INJECTION OF SALINE SOLUTIONS FOR SEVERE HEMORRHAGE.—Dr. Egerton Jennings has devised a trocar and canula for phlebocentesis which appear simple in construction and well adapted for the purpose of transfusion. It has also a siphon attachment, which can be employed either for blood-injection or for ordinary saline solutions. The point of the trocar is pen-shaped, with the top turned up in order to avoid the posterior wall of the vein operated on. The canula is 1½ inches in length, and is provided with a slight shoulder, so as to make it self-retentive; there is also an inner canula attached to the branch-tube of the siphon, made like the outer one, except that it is perfectly cylindrical and slides into the outer canula. In cases of loss of blood, saline solutions are advised; but they will not answer in poisoning by carbolic acid or similar agents, nor in pernicious anæmia.

The risk of fibrination is minimized by this method, for the blood after passing through the efferent canula and branch tube (which is very short) immediately mingles with more than twice its bulk of a saline fluid. The continuity of the flow as regulated by the siphon is most equable, instead of being intermitted by the jerks of the artificial heart (in the shape of a rubber bag or receptacle, worked by the operator's hand) which belongs to most of the immediate transfusion apparatus in vogue. The substitution of a few drops of liquor ammoniæ for the alcohol directed to be added to the saline fluid would materially assist in retarding coagulation. Since the blood of males is less prone to coagulate than that of females, and as pregnancy increases greatly the coagulative property, these facts, added to other considerations, certainly indicate that, as a rule, a male should be selected as the donor whenever blood-transfusion is demanded.

POISONING BY A DRACHM OF CITRATE OF CAFFEINE.—At a recent meeting of the Medical Society of London, Dr. Routh read notes

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of a case of poisoning by citrate of caffeine. The drug had been prescribed in drachm doses, three times a day, for the relief of severe headache in a man under treatment for debility. Bishop's effervescent preparation was intended, but the pure drug was sent. Fifty minutes after taking one powder he complained of burning sensation in the throat, of giddiness; there was vomiting and purging, with pain in the belly. He then became almost paralyzed, and was affected with tremors, but his intellect was clear. Dr. Routh found him an hour later collapsed; pulse about 120. Ipecacuanha was given as an emetic, but, failing to act, some animal charcoal, with nitrite of amyl and ether, was given. Vomiting subsequently took place, and ammonia, alcohol, and nitro-glycerin were given. For some hours he remained much depressed, and did not rally completely till 1.30 A.M. next day, or nine hours after taking the caffeine. Nitro-glycerin in one-minim doses was given every two hours, with digitalis, and in about three days he recovered to his former state.—*Lancet.*

JEQUIRITIC OPHTHALMIA.—Wecker (*Ann. d'Oc.*, Nov.-Dec., 1882) has employed jequirity in a large number of cases of obstinate granular conjunctivitis, and draws the following conclusions: 1. Lotions of infusion of jequirity-seeds produce a purulent ophthalmia of croupous nature, the intensity of which can be regulated by the number of lotions which are employed, and by the strength of the infusion employed. 2. The cornea runs no risk during the evolution of the jequiritic ophthalmia. In only a single case, in which the ophthalmia was pushed to a veritable diphtheritic aspect, was there produced a circumscribed and transient desquamation of the cornea. 3. The jequiritic ophthalmia rapidly cures the granulations, and, even if reproduced several times, it acts with much less danger and discomfort to the patient than inoculation, for it always disappears, without any treatment, by confining the patient for from eight to twelve days in a darkened room.—*New York Medical Journal.*

CAUTERIZATION OF THE CLITORIS IN HYSTERIA.—The late Professor Friedreich shortly before his death had prepared a paper, which has since been published, on this subject. In many cases of obstinate and severe hysterical affections he has found that cauterization of the clitoris by nitrate of silver has had the most beneficial effects. The cauterization must be severe, as slight superficial cauterization tends rather to aggravate the disease. The pain is at first severe, and during it the patient must remain in bed. Among the cases which he gives as cured with extreme rapidity by this method are—one of paraplegia, which had lasted for a year and a half; hysterical aphonia, lasting for two years; glossoplegia, lasting for four months; tonic spasm of the spinal accessory, lasting for seven months; and several cases of general severe hysterical convulsions.—*Virchow's Archiv*, and *Practitioner.*

VERATRUM VIRIDE IN TYPHOID FEVER.—Dr. A. W. Nelson strongly endorses the veratrum viride treatment of typhoid, his observations being based upon twenty-eight successive cases in private practice, all recovering. The most obvious beneficial effects were manifested in the reduction of the pulse and temperature, and during this treatment these should be carefully watched. The preparation is the officinal tincture, and the doses are from one to two drops per hour, up to five or more. This is given from the onset of the disease to convalescence. The elimination of the veratrum viride is rather rapid, so that these patients were usually under the influence of from three to twelve drops continuously. It occurred sometimes that the medicine was given only every two hours at night. The entire quantity in twenty-four hours would be from twenty to forty-eight drops, and this would be continued for from ten to fourteen days. His conclusions were that the use of veratrum viride tends to shorten the duration of typhoid fever, so that many cases terminate at twelve days, some at fourteen or fifteen, a smaller number at three weeks, the results being more definite and satisfactory than any other plan of treatment.—*Archives of Medicine*, April.

NEW OPERATION FOR SPINA BIFIDA.—The report of an unusually interesting operation is communicated by A. W. Mayo Robinson in the *British Medical Journal* (March 24). Being obliged to operate early in a child only six days old, the spina bifida being in the lumbar region, and the skin over the swelling being so thin as to threaten rupture, the skin was dissected off and the redundant membranes removed. The serous edges of the borders of the deep wound were brought together by silk sutures, and over the sac was placed a portion of periosteum obtained from a living rabbit. The operation was successful in closing the opening and in saving the patient, but the bony tissue had not developed from the periosteum up to the time of reporting the case. The fibrous periosteum, however, doubtless strengthened the wall and so prevented a return of the disorder.

TREATMENT OF STYES.—For hordeolum Dr. David Webster has used calcium sulphide, a granule (gr. $\frac{1}{10}$ each) each hour until ten have been taken, repeated daily, with marked benefit.—*Archives of Medicine*, February.

BACTERIA are best destroyed by a solution of bichloride of mercury (1 part in 10,000). This has been used successfully as an injection in gonorrhœa.

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MISCELLANY.

THE PRACTICAL OPERATION OF THE MARINE HOSPITAL SERVICE DURING EPIDEMIC YELLOW FEVER.—"It is well known that Congress has given $100,000 to the Marine Hospital Service for use during epidemics. Further, it gave nothing to the National Board of Health. Last season there was at Brownsville, Texas, an epidemic of yellow fever, and the Marine Hospital Service took charge of the town. What were the results? The *Sanitarian*, March 8, gives a correspondence between the mayors of Pensacola and Brownsville, fully answering this question. We could hope, for the credit of the Marine Hospital Service, that it could be shown that this correspondence does not represent the truth. But then the facts are stated over the signature of the mayor of the afflicted town, and it is not easy to see how he could be mistaken, or dare to misrepresent. He says, 'In my opinion, this community (Brownsville, Texas), received no benefit from the Marine Hospital Department, other than that involved in the employment of some thirty persons—who would probably otherwise have been idle—as quarantine guards, and in the personal services of three of the physicians who accompanied Dr. Murray to Brownsville as assistants. For a short time after his arrival, Dr. Murray's personal services, as a physician attending the sick, were also of great value; but on the establishment of his quarantine his entire time appeared to be occupied by matters in connection with that duty. As an offset to those benefits and advantages, we had the arbitrary assumption of control of quarantine matters by Dr. Murray, and his attempt to override the local health authorities, the inconvenience of the useless restrictions imposed by the quarantine, and the injury caused by that institution, when, as our election-day approached, it drifted into a mere political machine, and was used for the purpose of facilitating the election interest of candidates supported by the custom-house district. Two days after the election it disbanded. On election-day sixteen of its members were interested as candidates, or occupied as supervisors of election and deputy marshals, and the remainder as runners or supporters,—all, however, on the same side.' We have not space to further quote the mayor's exact words. But the supplies of medicine, nurses, and physicians furnished by the Marine Hospital Department were utterly inadequate and unfit for the end desired, the caring for the sick, so as to restore them to health, etc. The nurses brought by this department became the very terror of the sick. The quarantine not only did harm, but was so inefficiently kept as to be of no use. This is apparent when it is borne in mind that the line attempted to be kept by twenty-eight guards was seventy miles long. Besides, most on guard knew nothing of the topography of the country."—*Detroit Lancet.*

THE death of Dr. W. H. Van Buren, of New York City, in the sixty-fourth year of his age, is announced. At the time of his death he held in Bellevue Medical College the chair of the principles and practice of surgery.

THE COLLECTIVE INVESTIGATION COMMITTEE OF THE BRITISH MEDICAL ASSOCIATION is actively engaged in examining into the question of the communicability of phthisis. A valuable report may be expected.

NOTES AND QUERIES.

DEAR DOCTOR,—The following are the facts concerning the blackmailing scheme of which I was a victim. Dr. S. B. McDowell called me in consultation upon an old lady suffering from a fatal illness. She, knowing the inevitable termination, having no heirs, and possessing a small sum of money which she did not desire to have escheat to the Commonwealth, requested the doctor to have an assignment in his favor prepared that would bequeath to him all that remained after the settlement of her debts. At the request of the doctor, I, with Mr. J. B. Naulty, the individual with whom the patient boarded, witnessed the document. Later Naulty demanded of Dr. McDowell two-thirds of the money, and, being refused, threatened trouble. Naulty then had a will drawn up, and by some means obtained the lady's signature. He then had Dr. McDowell and myself arrested. At the hearing before the magistrate, Naulty stated that Mrs. Potts had always expressed her intention to make him her heir, and that the doctor and myself endeavored to defraud him of his money by compelling the lady to sign the assignment. An unprincipled prostitute, his (Naulty's) accomplice, repeated the same story. Similar allegations corroborative of the above were also made by one and confirmed by the other. We were bound over to court for trial upon the charge of conspiracy to defraud, and subjected to the flaringly presented sensational descriptions published by the associated press throughout the whole land. Soon letters of compromise were sent by Naulty to Dr. McDowell, any of which would convict him of conspiracy, perjury, and blackmail. The doctor and myself most positively refused to entertain notions of such actions, and instituted measures of protection and proving our innocence when on trial. The man, surprised at our meeting the issue, became alarmed, and relinquished his claims in favor of McDowell. Then I received a compromise article, in which he (Naulty) desired me to forego intentions of prosecution. This I kept and laid away for evidence. He was about to be arrested by me when the letter which appears in the papers was sent. This I acquaint you with, as I desire to appear in a true light before my professional brethren, and reflect no unfavorable light upon my Alma Mater

Yours respectfully,
HENRY BEATES, JR.

PHILADELPHIA, April 13, 1883.

EDITOR PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—In your issue of March 24, page 435, there appears an article upon "Cervical Erosions," in which I would like to ask your kindness to change the word "ureter" into "urethra." It should read "male urethra," etc. By so doing you will greatly oblige,

Yours very respectfully,
F. LESSING, M.D.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY FROM MARCH 31 TO APRIL 7, 1883.

HAMMOND, JOHN F., COLONEL AND SURGEON.—Granted leave of absence for six months on surgeon's certificate of disability, with permission to go beyond sea. Paragraph 6, S. O. 75, A. G. O., April 2, 1883.

HAMMOND, JOHN F., COLONEL AND SURGEON.—To be relieved from duty in the Department of the East, and to report by letter to the Surgeon-General U. S. Army. Paragraph 7, S. O. 75, A. G. O., April 2, 1883.

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PHILADELPHIA, MAY 5, 1883.

ORIGINAL LECTURES.

DISEASES OF THE KIDNEYS.

A Series of Lectures delivered before the Medical Class of the University of Pennsylvania

BY WILLIAM PEPPER, M.D., LL.D.,

Provost of and Professor of Clinical Medicine in the University of Pennsylvania.

Reported by WILLIAM H. MORRISON, M.D.

I.

GENERAL REMARKS—PAIN—FREQUENCY OF MICTURITION—DROPSY—QUANTITY OF URINE—COLOR—SPECIFIC GRAVITY—ESTIMATION OF THE AMOUNT OF SOLID MATTERS.

GENTLEMEN,—I need not tell you that the study of diseases of the kidneys is an extremely important subject of investigation. I know of no class of diseases to which it is so important that your attention should be directed, for they may exist for a long time before they assert themselves in so prominent a way as to force the patient to take notice of them and bring them to the notice of his physician. It is a peculiarity of diseases of the kidneys, as it is of affections of one or two other portions of the body, that they may progress for a long time without attracting the attention of the patient, and unless the physician is acute enough to investigate the matter, and possesses a practical familiarity with the subject, they may go on to an incurable stage before being recognized.

In speaking of renal diseases I shall, in the first place, ask your attention to the conditions which lead the patient to suspect that the kidneys are the seat of trouble; in other words, to the general symptomatology. It is perhaps worth while, in considering this subject, to divide diseases of the kidneys into two groups,—(1) functional affections, and (2) organic affections. These merge into each other by insensible degrees. One who has a functional affection of these organs is very apt to find, after a considerable time, that the affection has passed into an organic form, and organic disease may reveal itself by disturbances of function so slight as to be taken for merely a functional disorder, and the mistake may not be recognized for a considerable time, and not until more positive symptoms of organic disease present themselves. It is particularly in connection with nervous diseases of the kidneys that we recognize the wonderfully close relationship which exists between these organs and certain other great organs of the body, particularly the skin, stomach, and liver. This quartet are so closely associated that derangements of one constantly react upon the others. We can study no disorder of the kidneys in reference to diagnosis, prognosis, or treatment without being obliged to consider the state of the skin, the state of the stomach, and the state of the liver. It is in functional disease of the kidneys that this relationship is most closely observed.

In speaking of these symptoms of kidney disease I shall first take up those which lead the patient to think that the kidneys are affected.

Pain.—The first symptom which patients speak of is usually some pain which they refer to the kidneys; but the pain to indicate renal disease must be of a certain special kind. The pain that is commonly attributed to affection of the kidneys is rarely due to such trouble. Patients have very indefinite ideas as to the location of the kidneys: not one in twenty can put his hand within six inches of the region of the kidneys; the majority think that they are in the lower lumbar region: thus, many cases of lumbago, of fibrous rheumatism, of periostitis of the crest of the ilium or of some of the processes of the lower vertebræ, will arouse the suspicion in the minds of patients that they have kidney-disease. The pain which is really significant of affection of the kidneys is, for the most part, found over the position of these organs,—*i.e.*, high up in the lower dorsal region, on one or both sides,—and it is frequently associated with pain along the line of the ureters. Far more commonly, however, diseases of the kidneys advance without any distinct pain. There may be a sense of discomfort and of vague distress in the renal region, but the painful affections of the kidney are few; for instance, as you know, there is severe pain with renal or nephritic colic in connection with the gouty diathesis, with the uric acid diathesis, and with the presence in the urine of minute gravel, or with the symptoms of congestion or neuralgia of the kidney. These same attacks, only often more violent and associated with other symptoms, which we shall discuss at another

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lecture, are present in cases of renal calculus, whether the stone remains in the pelvis of the kidney or passes through the ureter into the bladder: so that if there is pain which is severe in the renal region, and particularly if it radiates in the course of the ureter towards the bladder and into the genitals, it commonly indicates one of the conditions which I have mentioned,—*i.e.*, congestion of the kidney, with an irritating condition of the urine, the uric acid diathesis with renal neuralgia, with or without minute gravel, and, finally, renal calculus, either impacted in the pelvis of the kidney or passing into the bladder. We should be careful how we depend upon pains described so often by patients which do not possess these characters.

Frequency of Micturition. — Another symptom which is often noticed and complained of is frequency of micturition. Next to pain, this is perhaps the most commonly observed by patients. When present, it attracts attention and at once arouses alarm. Frequency of micturition is merely a relative term. Some men will hold their water for twelve, some for eight, and some for four hours. There is the same difference in regard to this as there is in regard to the movement of the bowels. As long as a person goes all night without passing his water, and urinates four, five, or six times during the day, there is no undue frequency of micturition; but when he is called to relieve himself every two or three hours during the day, and is called up once or twice during the night, it is a symptom which calls for attention. While this symptom is usually observed by the patient, yet it is curious how a person may insensibly drift into the habit of passing water frequently without alarm being excited. I have often had patients reveal on close questioning that they were passing water with undue frequency, when it had come on so gradually that they could not remember when it first began, and had supposed that it was natural.

Frequency of micturition is not a constant and infallible symptom of kidney-disease. It is more commonly attendant upon vesical than upon renal disease; yet it is often present, to a certain extent, in the latter. Extreme frequency of micturition, particularly if the amount of urine passed at each time is small, is usually indicative of bladder-trouble; but in renal affections it is more commonly a symptom of inflammation of the pelvis of the kidney and of the ureter than it is of the organic troubles which we group under the name of Bright's disease. You should always associate with inquiries in reference to the frequency of micturition the questions, How much urine is passed at each time? And what is the total amount passed in twenty-four hours? I should say that it is rare in any organic disease of the kidney to have frequency of micturition without having an excessive amount of urine passed, while in vesical troubles it is usual to have great frequency of micturition with the passage of but a small quantity of urine at each time,—not more than one or two ounces.

We should carefully study the sensations of the patient at the time that he is called to pass water. In renal disease, unless there is inflammation of the pelvis or ureter with a high degree of irritation, the frequent micturition is unaccompanied by burning in the bladder or at the end of the penis, or with pain after the act of urination. In proportion as these symptoms are marked will you find that the frequent micturition is vesical, not renal, in its origin.

Before leaving this subject, let me observe that frequency of micturition is a symptom which is present in many kidney affections. In addition to renal congestion and irritation, it is common in certain forms of acid dyspepsia, lithiasis, uric acid and oxalic acid diatheses, in certain neuroses of the kidney with polyuria, and in organic disease of these organs. You therefore see how much care must be exercised in regard not only to the frequency of the micturition, but also in regard to many other conditions, before any importance can be assigned to mere frequency of micturition as a symptom of renal disease.

Dropsy.—Patients will come to you complaining of dropsy as a symptom of disease of the kidneys. There are certain generalities about renal dropsy worth stating at the outset, for it will save time when we come to speak of the sort of dropsy present in certain organic affections.

Renal dropsy differs from cardiac dropsy in the fact that even in the early stage it is not often limited to the feet. When the patient lies down, although the effusion may leave the feet, the face is apt to become puffy, and indeed the face may be swollen before the feet. In the early stage

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of heart-dropsy the swelling very constantly begins about the ankles. In such cases, as a result of some enfeeblement of the heart or obstruction to the circulation of the blood, swelling of the dependent parts takes place. When the patient lies down, the effusion re-enters the vessels and entirely disappears. In renal dropsy there is more than a mechanical element. There are, in addition, changes in the blood which make it less easy for the capillaries to pass it, and there are changes in the walls of the minute arteries and capillaries which make it easier for the serum to pass through them. There are, therefore, local conditions of the circulation present in kidney-disease which are absent in heart-disease, making renal dropsy more apt to be diffused and not limited to the lower extremities, as is the case with cardiac dropsy, so that there may be puffiness beneath the eyes when there is no swelling of the ankles. Swelling about the feet may be so slight that it is only by removing the shoe and pressing the thumb into the loose cellular tissue behind the malleolus that any œdema is detected. If you limit the examination to the spine of the tibia, you may entirely overlook the effusion. This swelling may last for a long time without increasing. Œdema is met with in many different kidney-troubles, not only in organic but also in long-continued functional disorders with vesical disease and the discharge of pus. I have repeatedly seen cases where I have been anxious to determine whether or not there was any organic disease of the kidney, where there was undoubtedly affection of the bladder, where the urine contained pus and albumen, and where œdema of this slight character had been coming and going for many months and years, but where I had never been able to find any tube-casts in the urine. As a rule, however, œdema directly connected with evidences of renal disturbance will, after a time, prove to be associated with organic disease. Œdema may, of course, appear in functional disorders as a result of the anæmia induced by the long-standing derangement of the kidneys, and by the dyspepsia which so constantly attends functional renal trouble, but it is always a significant and ominous symptom, and if it persists or often recurs justifies the suspicion that after a time we shall find evidences of organic disease. Within the past few days I have seen for the first time the characteristic tube-casts in the urine of a patient whom I have had under observation for more than twenty years, and who has had vesical trouble for forty years, with albuminous urine, and who for the past two or three years has had intermittent dropsy, puffiness of the face and ankles, coming and lasting a few weeks and then disappearing, to return after the lapse of a short time. His urine has during that time been examined over five hundred times, but never until a few days ago have I been able to discover any tube-casts.

Œdema may be an early symptom of renal disease, but more frequently it is a late symptom. It is impossible to judge of the gravity of a case by the amount of dropsy which is present, unless the dropsy becomes progressive. Increase of dropsy in renal disease is a bad symptom, except when it occurs in the acute form. In acute parenchymatous inflammation of the kidney, increasing dropsy is a prominent symptom; but this is a very curable disease. When, however, it comes on in a chronic case without any acute exacerbation to explain it, advances up the limbs, invades the arms and the cellular tissue of the trunk, it is an exceedingly grave symptom, and indicative of advancing organic change.

Alterations in the Urine.—More frequently, however, than by either pain, frequent micturition, or œdema, will the patient's attention first be attracted by alterations in the urine. Those changes which are most likely to be noticed are for the most part referable to functional disorders, while the more important changes are not observed. The alterations which mark the course of organic disease have to be revealed by the microscope and chemical tests. The changes which are apparent to the eye are dependent principally on the activity of the skin, or upon functional disturbance of the stomach, liver, or kidneys.

In order to appreciate the changes which may occur, it is necessary to have a clear idea of the characters of healthy urine and the best methods of examining it for disease. In examining the urine, attention is to be directed to the following points: the amount passed, the specific gravity of the entire mass, the amount of solid matters therein contained, its color, its odor, its reaction (whether acid or alkaline), the character of the sediment

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which is thrown down on standing, the reaction of its coloring principles to nitric acid, and the presence or absence of morbid ingredients, as albumen and sugar.

Quantity.—The total quantity of the urine varies, but it bears some proportion to the body-weight of the patient. It also bears a close relation to the activity of the skin, the state of the bowels, and the condition of digestion. It therefore has relations which are too complex to enable us to draw any important conclusions from the total quantity unless the variation is extreme. What I have said needs no elaboration; but remember, when trying to determine whether or not the quantity of urine is excessive, that it bears relations to the body-weight, to the activity of the skin, to the condition of the bowels, and to the state of digestion, particularly with reference to thirst and to the capacity for digesting liquids.

We may say that a healthy man, weighing one hundred and fifty pounds, may vary in the amount of urine excreted *per diem* between thirty-two and sixty ounces without its being a symptom of any disturbance. As a matter of fact, in all individuals the amount varies between these limits, according to the season of the year, and as we have thirst and constipated bowels, or as there is little thirst and loose bowels. One or two loose stools may decrease the amount of urine to twenty-four ounces. A considerable amount of thirst with a constipated state of the bowels may readily bring the quantity up to two quarts. These are the limits of entire safety. The urine is said to be scanty if it falls below thirty-five ounces. It is excessive if it goes above two quarts. In order to determine the quantity, you will, in practice, employ an ordinary chamber-pot and a pint cup, reserving a graduated measure like the one I show you for hospital practice and in those cases where you desire to make a minute analysis. In all cases where there is a suspicion of renal trouble I advise you to have the exact quantity passed determined at intervals.

Color.—The color of healthy urine is a light amber or a straw-yellow; it is, however, perfectly evident that the color will depend upon the period of the day, the state of digestion, and the concentration of the liquid, as determined by the activity of the skin and the condition of the bowels. Urine passed in the morning, after the patient has been warmly covered in bed, with the body quiet and the skin active for a period of eight or ten hours and not having taken any liquid, is concentrated, and, as a rule, more highly colored than the urine of any other portion of the twenty-four hours. On the other hand, urine passed after a meal in which a considerable quantity of liquid has been drunk is light-colored. Exposure to the wind soon after taking liquids will cause the urine to be of a light color. In order to obtain an idea of the real color of the urine, it should be the color of the combined mass of urine for twenty-four hours.

The coloring-matters of the urine are very complex, and they are liable to be affected in different conditions of disease. The study of the color of the urine is therefore an important matter. As in speaking of the individual affections of the kidneys I shall not have occasion to speak very carefully of changes in the color, I shall now say a few words in regard to these alterations.

I need scarcely allude to the fact that one of the most common changes is due to the admixture of the bile. This may be present with or without jaundice. When there is jaundice the urine is always bile-stained, but the urine may contain bile when no jaundice can be detected: thus the presence of bile in the urine becomes an important indication of engorgement of the liver, even when there is not sufficient obstruction of the bile-ducts to cause actual jaundice. The presence of bile in the urine is determined by the naked-eye observation and by the chemical test of pouring a few drops of urine on a white plate, adding a little nitric acid in the centre and watching the play of colors, violet, red, blue, and indigo, in circles from the centre outwards. This test is delicate enough for all ordinary purposes.

The urine becomes unduly dark in cases where the blood-globules are undergoing rapid disintegration. This color is different from that produced by the presence of bile, but may be mistaken for it: it is an intensification of the natural color of the urine. The liquid becomes of a dark sherry or brandy tint. This is dependent not only upon excess of the coloring-matters, but also in some cases upon morbid changes in these matters. It will often be found that the addition of nitric acid to a specimen of urine will cause a rapid change

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of color to a deep brown, the urine at the same time remaining perfectly clear. This indicates a morbid state of the coloring-matter, and is commonly associated with rapid disintegration of the blood-corpuscles and with deranged liver-action. This is often met with in cirrhosis of the liver. It is sometimes of diagnostic value, existing before the disease has advanced to a recognizable stage.

The color of urine is often lighter than natural. It is then spoken of as pale or whey-colored. It may be so pale that it is proper to speak of it as colorless. Paleness of the urine may mean one of several things: it may merely mean that there is too much water mixed with the right amount of coloring-matter, simply meaning, therefore, polyuria. The urine is also pale in cases of extreme anæmia, even where the quantity is not excessive. It is pale and usually copious in various neuroses, as after an hysterical paroxysm. It is important to remember that it is often pale in albuminuria, not only in consequence of the excess of water, but also because there is an actual deficiency in the amount of coloring principles present. Lastly, it is not uncommon, although not so constant as in albuminuria, to find the urine rather pale in diabetes. Let it, however, never be forgotten that in neither of these grave diseases need there be the slightest change in the appearance of the urine, and that the color of the urine in the most hopeless type of renal disease may be just as clear and healthy as that of the urine in the bottle which I hold in my hand.

Specific Gravity.—The specific gravity of the urine is determined, as you know, either by taking the specific gravity of one or two specimens or by collecting the urine for twenty-four hours and taking the specific gravity of the entire mass. According to the disease which we are investigating, we pursue one or other of these methods. In some affections the density of the urine should be determined from the entire quantity. This is particularly true of polyuria and of glycosuria (diabetes). In other instances it is sufficient to obtain the specific gravity of one or two specimens taken at different periods of the day. We usually examine the urine which is passed in the morning; but it is to be remembered that this possesses the highest specific gravity of any specimen in the twenty-four hours. When we suspect that there is an undue amount of organic or inorganic matters thrown off by the kidney, as in cases of defective primary assimilation due to gastric or hepatic trouble, and we desire to estimate the waste, the morning urine should be obtained. Its specific gravity is an important indication of the severity of the functional disturbance; but in such cases this examination should be checked by collecting the mid-day urine and taking its specific gravity. Under such circumstances you may find the difference between the two observations to be as between 1032 and 1022, or as between 1028 and 1018. It is, therefore, clear that in determining the specific gravity of diabetic urine it would be impossible to do it accurately unless a specimen from the total quantity is obtained.

You are all familiar with the apparatus used in determining the specific gravity. I would simply mention that in reading off the specific gravity you should not take the highest line of the liquid, for it is drawn by capillary attraction above the exact level. The reading should be made between the upper and the lower line.

The extremes of specific gravity are as great as the differences in color. The specific gravity may be as low as 1001. This I have repeatedly seen. There is then a small amount of solid ingredients to an enormous amount of water. More commonly the specific gravity in polyuria is 1005 or 1007. A specific gravity that is pretty constantly about 1010 or 1012 is frequently associated with chronic interstitial nephritis and albuminuria. A specific gravity from 1015 to 1025 is normal. A specific gravity of 1025 to 1030 or 1032 is often associated with that condition of excess of the organic and inorganic matters of the urine, as urates, phosphates urea, and urea, which is so commonly associated with defective digestion and imperfect liver-action. A specific gravity between 1032 and 1075 indicates diabetes; but diabetic urine may not be above 1020. This is, however, unusual. By observing the specific gravity our attention is directed to the probable condition; but we of course would never form an opinion from the specific gravity alone.

Estimation of the amount of solid ingredients.—A pretty correct idea of the amount of solid matter in any specimen of urine may be obtained by the following simple rule: multiply the number by which

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the specific gravity exceeds 1000 by 2. This gives the number of grammes of solid matter contained in 1000 cubic centimetres of urine.

If the specific gravity is 1020, there will, according to this rule, be 40 grammes of solid matter in each 1000 cubic centimetres. If the amount excreted during twenty-four hours is forty ounces, which equals about 1200 cubic centimetres (1000 cc. = 33⅓ oz.), the total amount of solids would be 48 grammes. Again, suppose a patient with polyuria is passing 200 ounces (about 6000 cc.) of urine, with a specific gravity of 1005, in the twenty-four hours, we should have the following:

$5 \times 2 = 10$ grammes in 1000 cubic centimetres.

$10 \times 6 = 60$ grammes in whole amount of urine.

As each gramme equals about 15 grains, the amount of solids in the case I have supposed would be 900 grains,—rather a high figure for the total amount of solids in a day's urine.

This method is, of course, not as accurate as evaporating the urine to dryness and weighing the residue; but that plan is troublesome and disagreeable, and is rarely adopted in practice.

I shall continue this subject at our next lecture, and, after showing you how to complete the examination of the urine, devote the hour to a study of the functional diseases of the kidneys.

ORIGINAL COMMUNICATIONS.

CANCER CURED WITHOUT THE KNIFE—THE OPERATION A SUCCESS, BUT THE PATIENT DIES—REPORT OF THE TRIAL OF A TRAVELLING CANCER-DOCTOR FOR MANSLAUGHTER.

Communicated by Dr. C. W De Lannoy, M.D., of Chester, Pa.

THE result of a recent trial in this State, in which a travelling cancer-doctor was charged with causing the death of an old lady, it is believed possesses points of peculiar interest to the profession, and is therefore placed upon record here. The case was that of the "Commonwealth *vs.* Dr. Samuel Gast," before the Delaware County Criminal Court, March term. The defendant being tried for manslaughter, the jury found a verdict of "not guilty," and discharged the prisoner.

The facts are briefly as follows. Gast, who hailed from Iowa, visited Chester and filled the newspaper with laudatory notices of his wonderful cures of cancer "without the use of the knife." Among others, a farmer's wife, Mrs. A., 78 years of age, suffering with a small superficial ulcer which was located in the left infra-mammary region, fell into the toils. After the treatment, and as a result of it, an immense ulcer developed upon the right side of the chest, and she perished from hemorrhage and exhaustion. The case was referred to the coroner, whose physician, Dr. Jefferis, assisted by Dr. J. L. Forwood and myself, reported the following at the inquest as the result of our examination:

Autopsy.—The body was that of a fleshy woman, thoroughly frozen. Over the left side of the chest-wall was a blood-stained wound of the following dimensions: beginning its outline at a point two inches to the right of the median line, over the second rib, running diagonally upwards to a point one-half inch above the left sterno-clavicular articulation, thence proceeding in an oblique direction to the upper border and middle of the left clavicle, from this point curving outwards to within half an inch of the head of the humerus; here the outline dipped down into the axilla, and proceeded backwards, reaching to within one inch of the external scapular border; from thence it proceeded irregularly downwards, describing a half-circle, until on a level with the seventh rib. From these remote posterior limits the outline proceeded around and across the front of the chest to its starting-point, including the nipple and about one and one-half inches of skin below it.

The diameters of the wound were as follows. From a point over the right second rib to the extreme posterior limits, eleven and three-fourths inches. From the middle of the clavicle to the lower border of the wound, nine inches. Surface-area of ulceration, seventy-eight and one-fourth square inches (approximatively). The removal represented the entire thickness of the integument, and about one-half to three-quarters of an inch of subcutaneous adipose tissue.

We were also shown a jar of alcohol bearing the following inscription: "Dr. Samuel Gast, of Princeton, Scott Co., Iowa, removed the within cancer from off Mrs. A., without the use of a knife." The jar in fact contained a huge plaque of skin, with irregular edges, long dog-ear appendages, and button-holes. This trophy of Dr. Gast's surgical skill we identified

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as having occupied the location of the wound described: the amount of shrinkage produced by alcohol on the one hand and freezing on the other had at first given rise to some doubt in this direction. Satisfied with the genuineness of the piece, we then looked for evidences of disease, and found that about five inches from the nipple, on the line of and a little below the axillary border, was an ulcer about the size of a three-cent piece, and extending from this about two inches in a horizontal direction towards the sternum was some thickening of the integument: no further evidences of disease could be detected by the unaided eye.

Passing then to the general examination of the body, we found no axillary glandular involvement, and all the viscera in an extraordinarily good condition: there were even no pleuritic adhesions, so commonly met with in autopsies, and the senile changes which might have been reasonably looked for in a woman of her years were entirely absent. In fact, except a few cysts beneath the capsule of one kidney, nothing pathological could be detected.

As the result of the above autopsy, we gave our opinion "that Mrs. A. came to her death in consequence of the large ulcerated wound which was inflicted upon her chest." Knowing little or nothing of her history after the operation, it was our opinion that she had yielded to the exhaustion consequent upon hemorrhage, pain, and the serious nervous phenomena which follow extensive surface-injuries. Besides this report, Dr. Forwood was able to add some important information, as the deceased had been a patient of his. He stated that about one month previous to Gast's operation he had examined her chest, found the mammary gland free from tumor, and had seen the superficial skin affection alluded to: it had only troubled her when she was very warm, and then only by a sense of itching, no pain having been spoken of. He informed her husband at that time that it was probably malignant, but at her age would not give much trouble, and further urged him never to mention to her the word cancer, as the resulting mental disturbance would affect her general health, which was at this time most excellent. This was the last time he saw her alive.

A graduate of a Philadelphia Eclectic college testified that he had been called to see her several days prior to her death. He had met Gast on a previous occasion, and had talked with him concerning his wonderful "cancer test;" he desired to strike a bargain with him and obtain possession of the remedy. He further stated that the patient when seen by him was a very sick woman. He then proceeded to describe a most anomalous condition of affairs, claiming that upon one side of the body there was "no circulation, on the other very much circulation;" he prescribed a mixture of aconite and belladonna "to relieve the inward fever," but he did not see the wound. Another witness testified that this doctor was the consulting physician Dr. Gast preferred, as he feared any other might, through feelings of jealousy, administer some poisonous drug. The regular physicians present were questioned by the jury as to the possible justification of this terrible removal of flesh, and united in condemning it. After all the testimony had been heard, the jury agreed on a verdict of involuntary manslaughter, and a warrant for the arrest of Gast and his accomplices was issued. Gast was accordingly apprehended at Bellefonte, Pa., where he was diligently working the same game.

After hearing the medical testimony, Judge Clayton held him to appear under bail at eight hundred dollars. A clergyman who had paid Gast seventy-five dollars for removing four cancers from his face exhibited his much despoiled countenance, and had Gast rearrested for malpractice, the judge placing the bail in his case at one thousand dollars. The accomplices of Dr. Gast were turned loose, but in default of bail the culprit was returned to prison. I would now like it noticed that the coroner's jury, composed of intelligent men, and Judge Clayton at the hearing just reported, found no trouble in reaching a conclusion as to the man's indictability, after hearing all the evidence. When the case came before the grand jury, a true bill was likewise found without any hesitancy.

When the case was called for trial, however, every attempt was made by the defence to cast ridicule upon the testimony of regular resident physicians of Chester, Drs. Forwood, Jefferis, and myself, and to discredit the direct and confirming evidence of the prosecution, which showed that the murdered woman had been in excellent health, with the exception of a small patch of skin disease, before she had fallen into the hands of the defendant; that he had

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applied something to the sore to "burn it out," and had removed a large skin-slough of about seventy-eight inches in area, which had been preserved in alcohol and was presented at the trial; that microscopical examination had failed to show the presence of cancer-elements, the original wound being simply a chronic ulcer; finally, as the result of this sloughing with attendant pain and hemorrhage, she had died.

Having had the duty assigned to me of making the histological examination, I had prepared some two hundred and fifty sections, and presented a number of these at the trial, together with micro-photographs, which were placed in contrast with others of epithelioma and of normal skin. I then stated on the stand that the comparison revealed that the disease was not skin-cancer, or epithelioma, but simply a condition of infiltration, such as would be found in ulcers, or in any skin inflammation of a chronic character. I pointed out the fact that the second photograph represented diseased or infiltrated fat, and that, as this particular portion was taken from the deepest stratum of the piece removed, the operator, while making an extensive surface-removal, had evidently failed to eradicate all the disease, by not going deep enough. In order to ascertain how much of the seventy-eight and one-fourth square inches was diseased, I began my examination beneath the spot above referred to; then, by taking out slices in a radiating manner, going out from this centre towards every point of the circumference, I ascertained that the outline of originally diseased tissue included about three square inches, the remaining seventy-five and one-quarter square inches being perfectly healthy skin. It is thus seen that, had any operation at all been justifiable, the destruction of tissue in this case was twenty-five times greater than was necessary.

By the defence I was severely criticised as to the thoroughness of my examination. As I had stated that the sections were about $\frac{1}{1000}$ to $\frac{1}{800}$ of an inch thick, and that two hundred and fifty of these had been examined, the attorney for the defence delivered himself of the following brilliant idea: Estimating the average surface-area of the sections as a quarter of a square inch, he declared that only one-quarter of a cubic inch had really been seen, and that this fraction represented all that was known of the entire piece. To the uninitiated jury this argument appeared plausible, but I explained it away by stating that, knowing the general anatomy of healthy skin, as a geologist understands the laminated arrangement of rocks, the sections which were made (two hundred and fifty, or about three observations to the square inch of tissue examined) would teach all that was needed to be learned from the piece examined.

The defence was such as might have been expected, but it is so amusing that it may be given somewhat in detail.

There were called to the stand a series of persons who either knew of cancers successfully removed by the defendant, or had themselves been subject to his treatment and represented cures. Among the latter three cases bore large marks of contracting cicatricial tissue involving the inner canthus of the eyes, the tear-ducts being completely obstructed, and a red everted condition of the lower lids existing (ectropion): when asked about this, they indignantly explained that it was the result of cold, and not of maltreatment.

The prosecution inquired of each person who knew of cancers cured by Dr. Gast, whether they had any personal knowledge of medicine, and, if not, "how they knew that these sores were all cancerous." The answer invariably was, "Dr. Gast said so." Some of his patients claimed to have had four or five taken from remote parts of their bodies, leading one to believe that in Iowa the disease was a sort of general eruption; in attestation they would show the broad flat cicatrices of extensive surface-cauterization. All of these cases attest to the fact that Dr. Gast limited his operation simply to a removal of the skin. Another lady in Chester, upon whom he operated, was afflicted with a mammary carcinoma; in her case he removed the integument covering the cancerous mass, and converted it into a large ulcerated cancer. This lady is at the present time very ill.

David Gast, nephew and student of Dr. Gast, when cross-examined as to his knowledge of cancers, said that he relied upon the "test medicine"* for a diagnosis. He

* Two forms of remedy were employed in the treatment of Dr. Gast. The "test medicine" was used only in diagnosis: it was applied to the suspected surface, and the cancer and its "roots" would turn black shortly afterwards: it was claimed that it had no action upon healthy skin. The caustic was then applied in the form of a paste, and packed

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gave the following highly original classification of cancers. There were, he said, spider cancers, rose cancers, black cancers, and cauliflower cancers, all of which would react to the "test medicine."

The attorney for the defence gave a remarkable specimen of forensic eloquence, which deserves to be preserved, as it shows that a knowledge of human nature is of more service in medico-legal cases than familiarity with pathology. He based his argument upon an attack upon the physicians, whom he represented as the real prosecutors, hiding beneath the cloak of the commonwealth. He sustained the theory of "cancer roots," and endorsed a charge made against the doctors of having removed them from the alleged cancer shown in court. He told the jury that "one day while walking through Media he saw a strange dog running down the street, as if anxious to escape pursuit. Very shortly afterwards a whole tribe of Media dogs came up and pounced upon him, allowing the poor fellow barely to escape with his life. No sooner, however, had they thrashed this poor stranger than they began to fight among themselves. It is thus with the Chester doctors and poor Dr. Gast." This gem was highly effective with the jury.

The argument for the prosecution was merely a brief review of the evidence.

Judge Clayton's charge was fair and impartial. He said that in this case everything hinged upon two points: "first, whether Mrs. A. came to her death as the result of the operation directly; and, second, whether that result was attributable to the lack of that professional knowledge which all physicians, whether regular or irregular, are by law presumed to possess. The testimony of the very competent, careful, and skilful physicians is of great importance, especially that of Dr. De Lannoy: he could have had no motive whatever in bringing about the conviction of Dr. Gast. A task had been assigned him, and you have noticed the great care with which it was done. It is all that the best medical expert evidence could be."

The jury retired, and returned shortly with a verdict of "not guilty"(!)

The physicians connected with the case—viz., Dr. Jefferis, Dr. Forwood, Dr. Dickinson, Dr. Milner, and myself, all graduates of either the University or Jefferson College—united in the expression of the opinion, "That, even had the whole mass really been cancerous, the operation was in no wise a justifiable one; and, as the microscope revealed only a small amount of disease, and that of a benign nature, such severe operative interference was wholly to be condemned." This plain and unanimously-expressed condemnation coming from five competent professional men in a single community, together with Judge Clayton's charge, should go on record in connection with the finding of the jury, among other curiosities of medical jurisprudence, as an illustration of the scant courtesy which the profession may expect in any attempt to shield the community from quackery.

under the edges of a sore with wooden paddles, the result being the separation of a slough, which Dr. Gast asserted was the cancer, "removed without the aid of the knife." The pain and hemorrhage accompanying this process were treated by "powwowing."

FÆCAL IMPACTION OF FOUR MONTHS' STANDING — INTESTINAL OBSTRUCTION, AND CONSTIPATION FROM BIRTH.

Read before the Philadelphia County Medical Society, March 21, 1883,

BY DE F. WILLARD, M.D.,
Surgeon to the Presbyterian Hospital.

X., COLORED, male, æt. 40, obstinately constipated from infancy; mother states that his first passage was twenty days after birth, and then only by repeated cathartics and enemata, although there does not seem to have been any occlusion of the anus. After this, while nursing, he averaged two or three stools per week, but after weaning the difficulty of securing evacuations increased, and at the age of ten his mother's habit was to give him a large dose of some cathartic medicine about once in ten days and thus secure relief.

At fifteen he rarely went to stool oftener than once in two weeks, and then only on account of artificial stimulation of intestines. At twenty he entered the army, and the difficulty increased until the interval was from three to five weeks.

At one time, while in the service, he states that after two months of constipation he was seized with violent pains and was in hospital for six weeks, apparently from an attack of slow peritonitis.

From that time to the present the period between each stool has been gradually

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lengthening, until during the past eight years he has usually waited from three to four months, when, the distention and discomfort becoming great, he would leave work and devote himself to cathartics and injections for three or four days, until the Augean stables were cleansed by the passage of about a water-bucket full of fæces. This process was one of such great pain that it usually left him very feeble and exhausted for several weeks afterwards. During all this time his appetite and digestion seem to have been good, and he was able to attend to his duties as janitor of a building, except at the seasons above stated.

It would be much easier to mention the cathartics which he had not tried than to enumerate the various ones employed. At frequent intervals, and in the hands of many physicians, he had wellnigh exhausted the list.

Upon visiting him, four weeks before his death, I found him writhing with pain in his abdomen, semi-delirious, feeble, exhausted, and exhaling a plainly-discernible but not excessive fæcal odor. He had now had no passage for nearly four months, there having been none of the usual diarrhœa accompanying impaction, and he had been in pain for about a week. His lips were pale, his eyes shrunken, and his body much emaciated. The tongue was dry, and the pulse feeble, but normal in frequency. The abdomen was very tender, and peritonitis of a slow type was present. Vomiting was slight, and, while somewhat excrementitious, was not decidedly stercoraceous. The abdomen was found to be filled by an immense solid tumor, apparently nodulated and lobed, suggesting carcinoma. On close palpation this tumor was resolved into a central irregular mass, with lobes, and, examining these more carefully, an enormous tube filled with a doughy mass could be traced from the left inguinal region into the latero-anterior lumbar, to the hypochondriac, across the epigastric, and down into the corresponding regions of the other side, where at the cæcum it joined the central tumor, the convolutions of which could be traced irregularly throughout the entire middle portion of the abdomen.

The large intestine seemed to be of about the size of a muscular man's upper arm, say four or five inches in diameter, while the central group of small intestines closely resembled a coiled mass of unlinked sausages.

The entire absence of fat in the abdominal walls made each portion palpable, and by hard pressure a piece of intestine could be pinched up and its doughy contents indented.

The finger, passed through a normal anus, revealed no strictures, but an enormous rectal pouch filled but not densely impacted with fæces. There were no herniæ, and no hard nodules of a malignant character could be discovered.

In order slowly to unload this distended bowel and relieve pain, the patient was ordered a pill containing colocynth, opium, nux vomica, stramonium, and belladonna, given in small doses, and repeated every two hours, large injections of weak salt water to be commenced at the end of ten hours. At the expiration of twenty hours, during which time the patient was much more comfortable and slept considerably, the first instalment was obtained in the shape of a wooden water-bucket two-thirds full of semi-solid fæces; another half-bucket followed that night, and a large-sized chamber *full* on each of the succeeding four days,—the pills having been diminished after the fourth day, and three grains of calomel given for one day in divided doses.

Fever diminished, vomiting ceased, appetite returned for a few days, and he was able to sit up for an hour or two. His tongue, however, remained dry, and the pulse and temperature continued above 100. The abdominal tenderness was still marked, and, as the intestines could be felt through the emaciated abdominal coverings, they could be distinguished to be decidedly thickened. The "tumors" had disappeared, and the belly was flat, although still tender and painful. From this time the peritonitis very slowly but steadily increased, typhoid symptoms soon supervened, and he died in twenty-eight days from the date of my first visit.

On examination, after death, a slightly increased amount of serum was found in the abdominal cavity; the peritoneum was reddened, and thickened, but showed no purulent deposit. At several places were whitened, dense deposits, and at the point where the transverse becomes the descending colon a band of old inflammatory tissue stretched across the tube, constricting it to the diameter of one inch. This narrowing

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would not have seemed so marked had it not been for the enormous dilatation of the intestines, both above and below the band. The colon throughout its entire extent, save at the point mentioned, was increased until it resembled that of the ox, being when fresh twenty-one inches in circumference at several places. The sigmoid flexure and the rectum were of similar size, and were all nearly empty, the only contents being a small amount of semi-fluid fæces. The walls were thickened, dense, and deeply congested. The ileum was of the size of the normal colon, and the jejunum was also dilated to a small degree. At several points Peyer's glands were ulcerated and threatened speedy perforation. There was no tumor, no malposition of organs, no disease of stomach, liver, or spleen. The pelvis was entirely clear from growths, and the rectum was unobstructed: in fact, there was nothing to interfere with the free passage downwards of intestinal contents, save the band above mentioned. This sprang from the upper left lateral lumbar region, and passed over and in front of the colon like a bridge, to fasten itself again to the parietal layer of the peritoneum about two inches higher up. While interfering with the free passage of the contents, it by no means closed the calibre, and liquid fæces passed through it with ease; in fact, there would seem, from its size, to be no difficulty even in passing large scybalous masses. The hardened tissue of the band was very dense, but I could discover nothing to determine positively its age. Whether it had existed from birth or was the product of various slow inflammatory attacks could be only conjectured, as the history was meagre. That it had never been more complete in its constriction than at the present time was evidenced by the fact that the dilatation of the tube below this point was as great as above, if not greater.

My theory of the constipation would, therefore, be that this band was due to intra-uterine inflammation, or to some adventitious tissue, which interfering with and arresting the normal peristalsis at this point, the wave could not reach the sigmoid flexure and rectum and proper expulsive efforts were hindered. Constant accumulation led to dilatation as a result, which dilatation became in itself a cause of further enlargement, since stretched muscular tissue is always incapable of acting properly. Cause and result thus acting and reacting, distention and relaxation were the natural sequences. The musculares mucosæ and the unstriped muscular fibres, both longitudinal and circular, throughout the entire extent of the colon gradually became less and less able to propel the contents onward, and could be roused into action only by vigorous cathartics or by excessive liquid exudations. This adventitious band may have arrested the peristaltic wave more effectually than does the so-called "third sphincter" of Chadwick, since the latter encloses circular muscular fibres in its two semicircular folds of mucous membrane, while this was simply a rigid mechanical obstruction. To have operated upon this man, with his previous history in view, and with the solidly-filled intestines already arousing peritonitis when first seen, would have been simply a cut in the dark, without reasonable hope of benefit.

TWO CASES OF TRAUMATIC TETANUS.

BY G. E. DE SCHWEINITZ, M.D.,
Late Resident Surgeon in the University Hospital.

THE following cases of tetanus were treated in the surgical wards of the University Hospital, under the charge of Prof. John Ashhurst, Jr., while I served as his resident in that institution:

C. M., æt. 34, was admitted to the surgical wards June 2, 1882, and gave the following history. Four days previously, while working in a machine-shop, he received a slight lacerated wound of the middle finger of the right hand. The wound was treated and the case progressed satisfactorily for two days, when he began to notice slight stiffness of the jaw and muscles at the back of the neck, while swallowing was attended with difficulty. His physician advised him to apply for admission to the hospital, and he accordingly came and was received on the day named.

His condition on entrance was as follows: decided trismus, so that the jaws could only be separated for a distance of about one-fourth of an inch, rigidity and spasm of the post-cervical muscles, difficult deglutition, which indeed was impossible except for liquid food, and on the distal phalanx of the middle finger there was a small, sloughing wound, with unhealthy edges, which exuded a few drops of pus.

The progress of the case is recorded from the notes which I took at the time in my capacity as resident surgeon:

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June 2, 3 P.M.—Finger freely laid open and a laudanum poultice applied. Full doses of chloral hydrate; nourishing liquid food.

June 3.—Pain somewhat better. During the night three slight convulsions, rigidity of the abdominal muscles, constant tendency to opisthotonus. Continue treatment, and add one-twenty-fourth of a grain of sulphate of eserine hypodermically every three hours.

June 4.—Rested more comfortably during the night until about six P.M., when a severe convulsion occurred. Opisthotonus more pronounced; unable voluntarily to void urine; catheterization difficult, on account of tendency to spasm which it produced. About noon, no improvement having taken place, the injured finger was amputated at the joint above, and the wound allowed to remain unclosed and dressed with pure laudanum. Continue chloral, and increase sulphate of eserine to one-twelfth of a grain every three hours. 6 P.M.—Less rigid than during the morning; expresses himself as more comfortable, and takes nourishment more readily.

June 5.—Improvement has continued. Jaw has relaxed so that two fingers can be placed between the teeth. Voluntary passages of urine during the night and to-day. Bowels freely opened by an enema; pupils contracted. Continue treatment, increasing sulphate of eserine to one-twelfth of a grain every two hours.

June 6.—Improvement has continued. Jaw has relaxed still further, and general muscular system more flaccid. Myosis continues. About six P.M., without any marked unfavorable change, was suddenly seized with a severe general tetanic convulsion. Convulsions continued to appear during evening and night, and were only controlled, or rather lessened in severity, by the free use of inhalations of nitrite of amyl. Continue treatment, and increase sulphate of eserine to one-eighth of a grain every two hours.

June 7.—Not much change for the better, and apparently no cause can be discovered for the unfavorable change. Wound looking well. Increase sulphate of eserine to one-fourth of a grain pro re nata. Convulsions still frequent. Deglutition impossible, and rectal alimentation necessary. Physical signs of hypostatic congestion of lungs over both bases.

June 8.—Convulsions during night less frequent, although unimpaired in severity. Nitrite of amyl of little avail to control them. 6 P.M.—Has failed very much, and is much exhausted. 8 P.M.—Death after a severe convulsion, respiration ceasing before cardiac action.

The second case was admitted on the same day as the one just detailed, and is as follows:

J. McG., æt. 10, was brought to the hospital, having just received an extensive lacerated wound of the left thigh by being caught in an elevator. The wound began near the apex of Scarpa's triangle, and extended outward and downward across the posterior part of the thigh to its inner aspect, and almost joined its origin anteriorly. The length of the wound was eleven inches. The fascia lata was everywhere exposed, and the skin and superficial fascia dissected up like an irregular cuff above and below. There was little or no hemorrhage, but much fine dust had soiled the wound. After thorough cleansing, a few interrupted sutures were introduced, the edges supported with adhesive strips, and the whole dressed with laudanum and placed at rest in a long fracture-box. The progress of the case was entirely satisfactory until early in the morning of the third day after admission, when unmistakable signs of tetanus manifested themselves. No especially unfavorable symptoms had appeared as prodromes, except perhaps that for some hours preceding the attack he had complained of epigastric pain. The onset was sudden, beginning with pain in the muscles at the back of the neck. Trismus was soon fully developed, and the countenance distorted into the *risus sardonicus*, or tetanic grin. Marked opisthotonus and convulsions rapidly came on, and every well-known symptom of tetanus appeared with unusual violence. The disease was essentially acute, and the prognosis necessarily most grave. The reflex excitability was greatly heightened, and the slightest peripheral irritation was sufficient to provoke a most alarming convulsion, during which life was threatened from apnœa.

The treatment during the first twenty-four hours was the same as that practised in the case just detailed, the doses of the depressomotors being regulated to suit the age of the patient, although as much as one-eighth of a grain of the sulphate of eserine was twice administered without producing any effect. At the end of that time the alkaloid was suspended, as not the slightest alleviation in the symptoms had occurred, and full doses of bromide of potassium during the day and chloral at night were given, together with nitrite of amyl and chloroform by inhalation during the convulsions. All treatment proved futile, and at the end of forty-eight hours from the beginning of the attack the case came to a fatal termination, death occurring during a prolonged convulsion from spasmodic asphyxia.

As in both of these cases the therapeusis was of a mixed nature, it is of course difficult to determine the value of any one of the medical agents. Certain it is, however, that in the first case no decided alleviation of any of the symptoms occurred until the hypodermic injection of the sulphate of eserine was practised, and then not until the drug had been given at the rate of gr.

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⅔-gr. i in twenty-four hours. At the same time, it must not be forgotten that the improvement followed amputation of the injured finger, which may also have been a factor in the case and have aided in the sense of a removal of a peripheral irritation. The improvement lasted about forty-eight hours; and, even after the unfavorable symptoms had returned at the end of this time, although the drug was unable to control them again, it still seems to have had power enough, when the dose was augmented, to lengthen the intervals between the convulsions, while it failed to lessen the severity of each individual spasm. The physiological action of the drug upon the pupil usually manifested itself about one-half hour after administration, but the myosis was not constant until the dose had been increased to gr. $\frac{1}{12}$ every two hours. In Case II. no effect from the drug was obtained, either by relief of any of the symptoms or by the manifestation of its physiological action. In regard to the proper amount of the alkaloid of Calabar bean to administer, gr. $\frac{1}{15}$ is said to be a moderate dose for an adult (H. C. Wood, Therapeutics, 4th ed., p. 327), while Bouchut has found that gr. $\frac{1}{20}$ will produce very decided symptoms in a child. I think the distinguished author just quoted regards this quantity—*i.e.*, gr. $\frac{1}{15}$—as a very full dose, and does not advocate its employment in such amount in the healthy adult. Certainly gr. $\frac{1}{12}$ every two or three hours, even in a severe case of tetanus, was able to produce rather permanent myosis and relaxation of the abdominal muscles, without, however, inducing any tendency to syncope, an unfortunate manifestation which has been reported as occurring during the free administration of the drug in the treatment of tetanus. Many cases of tetanus have been treated with this drug, with very varying degrees of success. Dr. B. Roemer (*St. Louis Medical and Surgical Journal*, 1873, p. 367) has collected forty-seven cases, with twenty deaths. Fenwick, Franzolin, Laborde, Valdivieso, Tyson, and Johnson have published cases terminating fatally, while Duncan, Fenwick, Newman, Keen, Packard, Cunningham, Watson, and Le Cato report others which ended in recovery. In all these cases either the bean or its extract or tincture was employed, sometimes alone and sometimes either in conjunction with or after other medication had failed. The alkaloid would seem to be preferable, on account of its certainty, and also because by its use hypodermically the result would more quickly be obtained, and any disturbance of the stomach or the production of diarrhœa, as in a case recorded by Dr. Ashhurst, be avoided. Calabar bean would seem, from many of the cases reported, to be more acceptable in such instances as are chronic or subacute in character, and not to be so useful in the acute forms of tetanus, in which, indeed, no one remedy probably affords the best chance for recovery, although in Dr. Watson's report (*Glasgow Medical Journal*, 1869, vol. i. p. 54) of eight cases, with six recoveries, he says "they were all acute traumatic cases, some of them severe, and all warranting unfavorable prognosis."

1330 SPRUCE STREET, PHILADELPHIA.

NOTES OF HOSPITAL PRACTICE.

ORTHOPÆDIC HOSPITAL.

CLINIC OF S. WEIR MITCHELL, M.D.

Reported by Dr. BROWNING, Resident.

CASE OF HYPERTROPHIC PARALYSIS.

DR. MITCHELL considers it probable that this case originated in an attack of typhoid fever. Since, however, some forms of more or less acute spinal disease are at times confounded with fevers of low type, he does not regard this as certain. No permanent treatment was attempted.

Mrs. M., æt. 33, an American, married, and has had one child. The patient's paternal grandmother had paralysis consequent upon cerebral hemorrhage. Her father died of tubercular disease. All the other members of her family enjoy perfect health. With the exception of the acute diseases incident to childhood, the patient's health was perfect until she was fourteen years old, when she had typhoid fever, from which she but slowly recovered. During her protracted convalescence from the fever her friends noticed a decided waddling in her walk, with considerable drooping of her body to the right side, and, although this defect occasioned much remark, she claims to have scarcely noticed it herself, nor did it cause her any inconvenience. As she gained in strength, however, the peculiarity of her gait noticeably diminished, although she thinks it never quite disappeared. She was married when

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eighteen years of age, and a little over two years later gave birth to a child.

Shortly after this time she again began to notice a certain unsteadiness of gait. This gradually increased during a period of four years, by which time she was fully aware of a decided loss of power in her legs, accompanied by a certain amount of inco-ordination, which soon made it necessary for her to have support in walking.

Among the first symptoms she observed were that while walking on the street she would stagger, or trip, without any assignable cause; or a sensation of great weakness in her legs would be suddenly developed, attended with considerable jerking or quivering of the muscles of her thigh above the knee.

Following these premonitory symptoms a general relaxation of all the muscles of her legs would take place, a sense of great prostration would take possession of her, surrounding objects would swim before her eyes, and if not supported she would fall. Again did she notice the diminished power in her legs by her inability to rise from a chair without the assistance of her hands, or in the act of sitting down she would suddenly and unexpectedly plump into the chair.

Similar inconveniences were experienced in going up and down stairs.

In addition to these symptoms of increasing paralysis was a sense of constant fatigue in the enfeebled members, attended with weakness in the back and occasional sharp darting pains radiating into the pelvis. The only other symptoms to be mentioned were chilly sensations, accompanied by general tremor of the body and palpitation of the heart, whenever she was exposed to the cold air or in any way excited.

About five years ago it became apparent to her that she was also losing power in her arms. Her attention was first directed to it by an increasing inability to raise her hands to her head, while arranging her hair, without some support for her elbows.

She is also of the opinion that her arms have grown much smaller.

During the past five years all her symptoms have progressively increased, and at the time of her admittance to the hospital the characteristic features of the disease under which she labors are well marked.

The position assumed by the patient in standing is characteristic. The feet are widely separated; the left foot inclines to talipes varus, while the toes present a strongly-marked claw-like incurvation. The right foot presents no departure from the normal position, except as regards its axis, which is directed inward. The body is bent to the right side, its weight resting principally upon the right leg, which occasions considerable outward bowing at the knee.

The shoulders are braced well back, and the scapulæ are unduly prominent. The abdomen is inordinately protuberant,—a result of the marked degree of lordosis which exists.

Upon being requested to walk, she invariably commences with the right foot, which, after some hesitation, is put forward, and as it advances describes an arc, and then comes suddenly, and with a jarring stiffness, to the ground. She then momentarily balances herself, and the left foot is advanced in a similar manner. During the walk the body is bent either to the right or the left side, according as the opposite leg is in motion. This gives to the gait the characteristic waddling. As she advances, the steps become shorter and executed with increasing uncertainty, until finally she loses her balance, grasps at some object for support, or falls. After being seated in a chair for some time, if requested to rise, considerable time elapses before she appears to be equal to the task. Then, after many futile attempts, she firmly grasps the arms of the chair, throws her head and shoulders well back,—then the lordosis is marked in an extreme degree,—straightens her legs with difficulty, and after a last but desperate struggle attains the erect position.

In the act of sitting down she seems to have abandoned all idea of executing the movements gracefully, but suddenly plumps into the chair. There exists also an inability to cross one leg over the other. All other movements of the legs are imperfectly performed, except flexion of the toes.

There is no impairment of the movements of the arms, except elevation above the head. Measurement of the extremities gives the following results:

Right arm, 9 in.
Left arm, 9¼ in.
Right forearm, 3 in.; below elbow, 9 in.
Left " " " " 8⅛ in.
Right thigh, 6 in.; above patella, 14¾ in.
Left " " " " 16¾ in.
Right leg, 12¾ in.
Left " 13¼ in.

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The muscles of the arm are soft and flabby, and are certainly lacking in power, but the muscles of the forearm are firm.

Upon the anterior aspect of the thighs are large patches of roughened skin, not unlike that which is seen upon the abdomen of women after pregnancy, and below the knees are patches of goose-flesh.

There is no mottling, but there is to be observed a slight enlargement of the superficial veins near the ankle. The skin is of a yellowish, muddy complexion, but becomes of a dark blue upon exposure to cold.

The feet usually feel cold, but this disappears by evening. The surface-temperature of the legs, taken through a week, gives an average of $95\frac{2}{10}°$, the average temperature of the body being $98\frac{4}{10}°$. The calves present a considerable degree of hardness, and it is difficult to pinch up the underlying areolar tissue: this is more noticeable in the left than in the right leg.

The patellar reflexes are very slight, and there is no ankle clonus.

Sensation remains unaffected. The patient readily distinguishes between heat and cold.

The electro-sensibility is about normal. In the arms the farado-muscular contractility is considerably lessened in all the extensors of the fingers, and slightly lessened in the flexors. There remains, however, a good reaction in both forearms to a strong current. The reaction in both deltoids, especially the right, is generally lessened. All other muscles of the arms respond somewhat feebly.

The reaction in all the muscles of the back is diminished. The latissimus dorsi responds somewhat more energetically on the left side.

In both legs there is no response in either the anterior tibial or peroneal groups, but an application made to their surfaces brings out a reaction in the posterior tibial. The reaction of the gastrocnemii is slight. There is a slight reaction in all of these groups through the nerve.

In the thighs there is a very slight reaction in the quadriceps extensor groups, but no reaction through the anterior crural nerve. Practically, there is no response in the hamstring or biceps on either side.

There remains a slight reaction in the glutæi on the left side.

The electro-muscular contractility in both arms shows a general quantitative lessening in all the muscles except the extensors of the hand and fingers.

In the legs there is no response in the muscles, and a very slight reaction can be obtained through the peroneal nerve.

The muscles of the thighs show great quantitative lessening and diminished reaction through the nerve.

The glutæi show quantitative lessening.

The patient's appetite and digestion are good.

The bowels are regular.

The urine is of high specific gravity, due to an excess of urea, but contains no sugar or albumen. The menstrual function is normal. The action of the heart is irregular, occasionally intermittent, and a slight apex-souffle is heard after the first sound. The average pulse is 67°; the respiration 17. The pupils respond actively to light, and, with the exception of a highly-colored fundus, the ophthalmoscope reveals no morbid appearances.

January 30, 1883.

UNIVERSITY HOSPITAL.

CLINIC OF D. HAYES AGNEW, M.D., PROFESSOR OF SURGERY IN THE UNIVERSITY OF PENNSYLVANIA.

Reported by LOUIS J. LAUTENBACH, M.D.

VESICAL CALCULUS—REMOVAL BY LATERAL LITHOTOMY.

THIS child, 2 years old, brings before us certain symptoms which will always lead you to suspect vesical calculus. It suffers with pain on micturition. The child is continually pulling on the prepuce: hence its unusual elongation. We have here sufficient ground for the suspicion of stone. On introducing the sound and exploring the bladder, after a considerable effort the grating of the instrument against a hard body is heard as well as felt. There is no doubt of the presence of a stone.

The operation which I propose to perform here is the Cheselden operation,—the operation of lithotomy by the lateral method. Curious as it may seem, we are indebted to a quack for this operation. It was practised on the cadaver before some of the most distinguished men in France, and at length he succeeded in obtaining permission to perform it on the human subject. So numerous were those who wished to gain their way to the operative amphitheatre that it became necessary to call in the police to preserve order.

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In performing lithotomy, the first thing to be attended to is to open the bowels thoroughly the day previous to the operation, by a gentle cathartic. An hour before the expected time of operation, an enema should be used to empty the lower bowel. You must not forget, before introducing the staff, to make another examination with the sound and assure yourself of the presence of the stone; after which a few ounces of tepid water are to be injected into the bladder. You may now introduce the grooved staff, which is to be fixed in the position you desire, and kept so during the operation. You next make your incision on the left side of the perineum,—as most people are right-handed,—and divide the structures consecutively until you feel the groove in the staff, which should be in the membranous part of the urethra. Then cut directly down upon it, and then forward into the bladder. You should always follow the knife by the finger, to see that you correctly enter the bladder. After the bladder has been opened, the stone forceps are to be slipped along the finger into the bladder, and then to be turned about, fishing for the stone. The stone when caught is to be removed by a rotary movement of the forceps. After the stone has been removed, again introduce your finger, to see if there be more than one. You must now wash out the bladder; this is done to remove any débris which may have separated from the stone in the act of its removal. Frequently the transverse perineal artery requires a thread.

The patient is to be put to bed, and placed on a restricted diet for two or three days, and a little opium is to be administered to keep the bowels quiet. This operation does generally very well for children.

I am inclined to think that frequently the starting-point of the stone is a little sediment in the bladder at the time of birth.

Examining the stone, we find that it consists of laminæ. It is an aggregation in layers of small granular particles of urates and phosphates. The difference in the composition of the various layers is due to the fact that they have been deposited at different times.

SIMPLE CYST AT SIDE OF NECK—REMOVAL.

The next case that is of a female with a large cyst on the right side of the neck. One year ago it was tapped, but it rapidly reaccumulated, and she now comes here for relief. Cysts are common in certain regions, and this is one of them. Sometimes from the beginning it is only a cyst with a straw-colored or watery fluid. Such cysts are formed from the connective tissue of the part. Extravasation of blood may become the nucleus for a cyst: it causes irritation and an inflammatory deposit in the connective tissue of the part, then an effusion of serum occurs, which supplies the connective tissue with the necessary stimulus.

Sometimes cysts are secondary to carcinoma or sarcoma, these tumors undergoing degeneration.

This is evidently a simple cyst. The treatment—and there is but one—is to make an incision and carefully detach the cyst-wall from the surrounding tissues, being careful not to injure the important structures in which the tumor lies. The external jugular lies upon the tumor, and therefore we must be careful to avoid it. If these cysts are tapped, it always complicates matters, as the tapping is always followed by more or less adhesion. Here the adhesions to the various surrounding structures are quite firm, and must be carefully cut away. We must be very careful not to break the cyst in its removal, as the fluid would escape, the sac collapse in all directions, and the operation be much more difficult.

TRANSLATIONS.

RESORCIN IN HYPERPYREXIA, IN INTERMITTENT FEVER, AND IN ANTHRAX AND ERYSIPELAS.—Resorcin, which has been called "poor man's quinine," is attaining a useful position in therapeutics. In Dr. Braun's clinic (*Wien. Med. Presse*, i.) it has been used in over three hundred cases of child-bed fever, in all cases where the pyrexia attained a certain grade, and almost invariably it produced a marked reduction of temperature, generally to the normal, rarely below, which usually was accompanied by more or less sweating. In some cases this was profuse. The temperature after its reduction seldom remained low longer than a few hours, so that the dose had to be repeated in the evening when a high morning temperature had required its use earlier. The usual dose was three grammes (forty-five grains), which some-

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times had to be repeated. In cases where such large doses cause nervous symptoms, smaller ones are advised to be given and frequently repeated.

In intermittent fever resorcin has a position not far below quinine, although the dose is larger. Ugo Bassi (*Gaz. Med. Ital. Prov. Venet.*, 1883) reports its use in twenty cases, which were all cured except three. In one case the attacks were relieved by the remedy, but it did not prevent recurrences; this happens also with quinine. In all the remaining cases the cure was permanent, the patients being instructed to avoid fresh malarial poisoning. It required only two or three doses of two to three grammes each (thirty to forty-five grains) simply dissolved in water to effect the cure. Larger doses are not necessary. The great advantage of resorcin over quinine is its cheapness.

Dr. Skibnevsky (*Medizinskoje Obosrenije*, December, 1882) reports two cases of erysipelas in which subcutaneous injections of a five per cent. solution caused a rapid disappearance of the symptoms. From ten to twenty injections were made at one time into the affected area, and in each case they had to be repeated only once. It is worthy of notice that, in both cases, within about two hours after the injection not only did the fever disappear, but the temperature fell even below the normal.

Although resorcin in any form is not absorbed by the healthy unbroken skin, the contrary is the case when there is any morbid action going on in the skin, as in lepra, rupia, variola, scarlatina, or erysipelas, in which it both stains the skin and discolors the urine. In cases of parasitic disease of the skin its use has been attended by remarkable success. Dr. Justus Andeer has reported a case (*Aerztlich. Med. Blatt*, 1883) of carbuncle in which bacilli were detected, and a guinea-pig being inoculated with the pus died of septicæmia. Other remedies had been used locally without much result, when a fifty per cent. resorcin-vaseline salve was applied rather freely upon the pustular erysipelatous surface of the forearm, covered by a gauze bandage. A good diet was given. After this the pain and tension diminished, the surface rapidly assumed a more healthy appearance, and the eruption soon healed. The reporter declares that resorcin, whether in strong or weak solution, is entirely free from irritation, and never produces any eruption, and is, therefore, to be preferred to all aromatic disinfectants. It is best used in the form of salve. It is completely innocuous to the skin, and causes neither hæmoglobinuria like naphthol, nor toxic symptoms similar to those caused by carbolic acid, pyrogallic acid, etc. He does not approve of subcutaneous injections of the remedy.—*Deutsche Med. Zeit.*, No. 11.

THE MICROCOCCUS OF CEREBRO-SPINAL MENINGITIS.—In a case of sporadic cerebro-spinal meningitis reported by E. Leyden (*Centralblatt für Klin. Med.*, x.) an examination of the recent lymph lying under the pia mater of the spinal cord (obtained, without injuring this membrane, by a Pravaz syringe) showed a great number of micrococci, occurring both singly and in chains. These organisms were oval in form, and, although larger, in general appearance they resembled those found in pneumonia and erysipelas. Prepared with methyl-blue and fuchsin they had beautifully characteristic appearances. These organisms were also detected in the pia mater itself.

The presence of similar forms has been previously demonstrated in the exudative meningitis after pneumonia, as well as after injury to the skull. The reporter refers to this similarity, and considers it of interest that three diseases which in their anatomical forms and their course present so many points in common should also be associated with analogous microparasitic forms. Pathological anatomy had established the analogy between meningitis and erysipelas even before the parasitic element was talked of. This agreement appears sufficiently important to be mentioned here, and to recall the fact that erysipelas and pneumonia are not seldom associated with meningitis, whilst cerebro-spinal meningitis, even the epidemic form, is not rarely ushered in by a pneumonia.—*Deutsche Medicinal Zeitung*, March, 1883.

CHLOROFORM-INJECTIONS FOR TOOTHACHE.—Submucous injections of chloroform into the gum were first practised by Dr. Dop, of Toulouse, in 1872. For the last six years this method has been employed by Dr. Guillot to relieve odontalgia, and without a single failure. The needle of the Pravaz syringe is inserted into the gum above the tooth to the extent of two and a half centimetres along the bone near

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the roots of the diseased tooth, a few drops are injected, and the needle is slowly withdrawn, keeping the index finger over the puncture to prevent escape of the injection. Almost instant relief is afforded to the toothache, and teeth are saved that otherwise would be extracted. No inflammation, phlyctenulæ, or ulceration had been noticed after such injections. When the gums are tender, or there is pain after extracting a tooth, a few drops of chloroform in some aromatic water make an excellent mouth-wash. It, however, should not be continued without being alternated with other forms of wash.—*Le Progrès Médical.*

Outbreak of Trichinosis in Spain.—A number of cases of sickness occurred during February last in Malaga, which were traced to some diseased pork: it was ascertained that the symptoms were due to trichinæ. Some forty persons were affected: five cases were fatal. The Spanish government has ordered the establishment of municipal laboratories in all the cities of the province, and directed that all pork shall be examined before being publicly exposed for sale. In case of oversight or failure to detect trichinæ when they exist, the examiner is held responsible if such diseased pork is permitted to be sold.—*Le Progrès Médical*, No. 6.

The Administration of Santonin.—In an extended communication to the Berlin Medical Society upon the effects of santonin, Lewin considers some of the symptoms of the absorption of the drug and the changes it undergoes in the circulation, and also the manner of its absorption from the alimentary tract. Santonin is insoluble in water and in weak acids, but is soluble in the gastric juice: as a result, the drug, instead of passing into the intestine to destroy the parasites by direct contact, is absorbed into the blood, where it is likely to cause constitutional disturbances. An oleaginous solution of santonin, however, passes through the stomach unchanged, and exerts its effect upon the intestinal worms. The author therefore condemns the ordinary mode of administration, and recommends oil as a vehicle. In adults it may be given in a capsule; to children it is simply given in a dessert-spoonful of castor-oil. In the treatment of oxyuris, a solution of santonin in oil rapidly destroys the worms when injected into the rectum.—*Deutsch. Med. Zeitung.*

Sarcoma of the Skin cured by Arsenic.—Köbner reports a case of generalized sarcoma of the skin cured by hypodermic injections of Fowler's solution. This favorable result had continued unaltered nine months after the cessation of the treatment. Altogether the amount of the solution of the potassium arsenite used was 20.75 c.c. (equivalent to 0.23 gm. of arsenious acid). The remedy used for the injections was at first diluted with two parts of water, afterwards with only one; from two and a quarter to nine drops of Fowler's solution were used daily. The fluid was usually injected into the muscles, and principally in the gluteal region. The sarcomatous growths began to dwindle away, showing at first a sinking in of the centre; and coincident with this, some enlarged lymphatic glands which had become prominent, and the swollen liver and spleen, progressively diminished until they resumed their normal size. The tumors, which at first were of a dark red, became pale, and some of them at the close of the observation had entirely disappeared.—*Berlin. Klin. Wochenschrift*, No. 3.

On Affections of Mucous Membranes in Lichen Ruber vel Planus.—In a series of cases of lichen planus, studied by Crocker (*Monatsheft für prak. Dermatologie*), were found white streaks and spots on the tongue, and also on the inside of the cheeks. They were scarcely above the level of the surface, and gave no pain or annoyance. No parasite was discovered. These spots and streaks are believed to be of diagnostic value, as they sometimes precede the skin-eruption by several weeks, and may remain after it has disappeared.—*Centralblatt für Chirurgie*, No. 5.

Treatment of Dysentery.—From experience with the dysentery of the soldiers returning from the expedition to Egypt, Dr. Rawle recommends highly the following method. Give a simple enema at a temperature of about 90°, and as soon as it has been discharged give one containing sulphate of quinia (gr. x), tincture of camphor (f℥iv), in barley-water (℥ij), which is to be retained.—*La France Médicale.*

Communicability of Leprosy.—Köbner failed to cause the development of lepra by inoculation, or even by transplantation of tissue, in a number of experiments upon lower animals.—*Virchow's Archiv*, 88.

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PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, MAY 5, 1883.

EDITORIAL.

FOOT-BALL.

SOME years since, we took occasion to protest against the "Rugby Rules," which are now so universally followed in foot-ball, and which have converted a wholesome athletic sport into a barbarous and dangerous contest. The number of accidents which have resulted is very great.

At an inquest held in Liverpool on the 2d of last April, a coroner is said to have stated that "he had seen fractures of legs and arms, and dislocations without end, in the game of foot-ball; and the body before the jury was sufficient evidence that fatal results do occur." The unfortunate student had been "collared" whilst running with a ball, and the result of the fall was an injury to the spine, followed by death in a few hours. The umpires and spectators testified that the rules of the game had been in no jot or tittle departed from: indeed, the victim had said before his death that his opponent had acted fairly and squarely, and that he was to be pitied, not blamed.

This is the third inquest which has been held in the last few months upon foot-ball victims; one death from heart-disease, one from brain-injury. More serious, however, than these sudden apparent results, because more numerous, are the foundations laid for various organic diseases of the heart and nervous system by the violent strainings, the frightful falls, the sudden pitches upon the head, and the horrible violence of this gladiatorial pastime, which is in essence a rough-and-tumble fight and has probably wrecked a far greater number of lives than any one has an idea of. Although medical men in England, the continent of Europe, and to a less extent here, have spoken freely in regard to the matter, no attention has hitherto been given to their protests.

Young men and boys cannot perhaps be expected to have any wisdom in such a matter as this, but surely parents and caretakers might; and we think it to be the duty of medical attendants to warn such against the modern game. College authorities certainly have a responsibility in this matter. By a little effort they could restore the old rules of the game, under which the ball was not touched with the hands unless fairly caught, and never carried at all. In those days a "barked shin" or a bruised leg was the severest accident that could happen.

HOSPITAL MARINE SERVICE MANAGEMENT.

IN the Report of the Supervising Surgeon-General of the Marine Hospital, it is stated that the hospital at New Orleans had been offered for sale at thirty thousand dollars, but that, no sale having been made, the service had sustained the loss of the money paid for advertising.

The facts seem to be that this hospital, which had cost originally five hundred and ninety thousand dollars, and had had spent on it one hundred and fifty thousand dollars, was offered for sale, with the result of the highest bid being nineteen thousand dollars. All this the honest, straightforward Surgeon-General of Marines did not deem of any interest to the general public, although he could weep over the pennies lost in the besmirchment of printer's ink. No wonder his virtuous indignation had to find vent upon the bad management of the medical affairs of the navy. Seven hundred and twenty-one thousand dollars taken from the hard earnings of sailors, to be wasted in one hospital, through incompetency, or something worse!

Again, we are told—but not in the report—that at Cincinnati a marine hospital was obtained at the cost of two hundred and

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thirty thousand dollars, and sold for seventy-five thousand dollars,—a hundred and fifty-five thousand dollars more gone! How many more of these hospital operations have disgraced the marine hospital service, we do not know, as we have no official facts to enlighten us; but those given in this editorial are vouched for as accurate by high authority. We should be most happy to publish an official denial of them. Of course no one has made money by these operations. No American politician ever did make money. Congress certainly ought, however, to insist on having a complete honest statement, so brief and clear that it could be read and understood by every one, of all the doings and the losses of this branch of the service; for at present its stupendous political cupidity and activity seem equalled only by the mystery of its mismanagement.

CONVICTION FOR UNLAWFUL PRACTICE.

WE print in another column the report of a case of atrocious malpractice which ought to have ended in severe punishment, but which simply shows the absurdity of jury-trials. We are, however, happy to state that a conviction has been secured in Wilkesbarre of one Wm. Taylor (Dr. so called), who was indicted under the recent law for "false statement of the right to practise medicine," and "unlawful practice of medicine and surgery." The evidence was clear that the man had made a false affidavit and had been practising unlawfully; and the jury, for once, did its duty,—much, it seems, to the surprise of most of the Wilkesbarre court attendants; at least so says the "Daily Union Leader." Of course motion was made for a new trial; but we trust the well-merited wrath of the law will not be turned aside from its victim. Murder is murder, whether done with drugs, gunpowder, or steel, and whether through reckless wilful ignorance or wilful ignorant recklessness.

DR. W. W. KEEN has been elected Professor of Surgery in the Women's Medical College of Philadelphia.

LEADING ARTICLES.

GASTROSCOPY AND ŒSOPHAGOSCOPY.

SOME OF THE RESULTS GAINED FROM THEIR EMPLOYMENT.

SINCE the time when dilatation of the main organ of digestion was first recognized as a separate disease of the stomach, and distinguished as a morbid lesion which may appear independently of carcinomatous or any other form of constriction of the pylorus, and since washing-out of the organ was instituted as a procedure specially indicated in this malady, the therapeutics of affections of the stomach has evinced a decided improvement. Diseases of the œsophagus, except ulceration and strictures, which fall generally to the province of the surgeon, are too much neglected by physicians, as a rule. Very little is known regarding œsophageal affections. But the introduction of the gastroscope and the œsophagoscope not only affords a better opportunity of studying the ailments of the stomach with more precision, but also those of the œsophagus will become more familiar and be better understood, recognized, and treated.

The gastroscope and the œsophagoscope* are both constructed on well-known principles and in a similar manner to other instruments of this class: the latter is modelled upon the cystoscope, and the former upon the urethroscope. Both have the hard, inflexible tube, the œsophagoscope being perfectly straight, while the gastroscope is bent between the ventral and middle thirds at an angle of 150°. A great and important improvement will be found in the gastroscope, in the walls of which, besides the conducting wires and the fine water-channels for the cooling of the glowing platinum wires, a minute air-channel exists, which is in connection with a rubber ball, by which the operator is enabled to drive air forcibly into the stomach if necessary.

* See Centralbl. f. d. Med. Wissensch., 1882, 21, L. Rosenthal; I. Mikulicz, Ueber Gastroscopie und Oesophagoscopie, Wiener Med. Presse, 1882, 45; Zur Technik der Gastroscopie, etc., *ibidem*, No. 52.

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The introduction and use of these instruments are comparatively easy (we mean the instruments described by Rosenthal, *loc. cit.*). The person to be examined has to bend the head backwards to straighten the cervical curvature, as is done when the common œsophageal tube is introduced; the curve which is made by the lower dorsal and the upper lumbar vertebræ is taken into account by the bending of the gastroscope, as mentioned above. The lower part of the instrument, resting in the stomach, permits a rotation of about 180°, so that one is enabled in succession to see a continuous part of the stomach from the fundus to near the pylorus, without any change in the position of the instrument becoming necessary. By pushing the latter up and down, the area of surface to be viewed may be extended.

Concerning the *technic* of the operation, the following may be remarked. The stomach must be washed out as thoroughly as possible, and then filled with air, which if it is regurgitated can easily be reintroduced during the examination. The patient generally bears a long examination best while resting on one side in the recumbent position, with the face slightly bent downwards. In this manner the saliva collecting in the buccal and pharyngeal cavities is given more facility to run out, without any attempts at coughing or deglutition. Either of these may, besides, be prevented almost totally by administering to the patient, about ten minutes before the examination, a hypodermic injection of a syringeful of a four-per-cent. morphia solution, consciousness being fully preserved. This remedy, as well as the horizontal position, is indicated for either examination, for that by the œsophagoscope as well as for that by the gastroscope. An assistant is necessary to keep the head of the person to be examined in the proper position. The procedure, as may be inferred, causes the least disturbance when the stomach is empty.

The œsophagoscope is introduced with the aid of a guide, which is removed as soon as the former is in the right position. Any mucus from the stomach ascending, and so disturbing vision, is taken away with cotton wadding after removal of the illuminating wire. Any existing pathological obstacles have to be determined, before the introduction of the instrument, by the common elastic bougie. As regards the examination of the stomach, it may be mentioned that, according as the right or the left half of the organ is to be viewed, the patient has to lie either on the right or the left side of his body, the operator taking his seat at the head of the person to be examined.

The results thus far obtained from œsophagoscopy and gastroscopy are small. Mikulicz, who directed his investigations to the physiology of the stomach and œsophagus, found the mucous membrane of the latter in the normal state always to be of a pale-red color; here and there fine blood-vessels are noted. The surface is smooth and moist; deep longitudinal fossæ are nowhere observed. The entrance to the œsophagus is closed perfectly by the constrictor pharyngis inferior, the action of which is sphincter-like; the walls of that part of the œsophagus which is situated in the neck touch each other, undoubtedly in consequence of the pressure of neighboring parts, especially, however, of the trachea. Below the thoracic portion, from the height of the incisura jugularis manubrii to the cardia, the œsophagus forms a perfectly open tube, which, by the aid of the instrument, can often be viewed in its entire length. The walls evince three kinds of motion,—pulsatory (being due to the action of the aorta and that of the heart), respiratory, and peristaltic (light oscillations, or perfect waves of contraction), the latter mainly noted on attempts at deglutition. The transition of the cardia into the stomach is gradual, and the passage, in the normal state, always open, the closure of the stomach to the œsophagus being effected by a valve-like arrangement of the former while contracting, or by special muscular fibres, which run a peculiar course (Hyrtl). By the pulsating aorta the œsophagoscope is also set into a pulsatory motion. But, in contrast with certain pathological motions later to be mentioned, these pulsating ones are like mild pushes or slight lateral impulses.

The mucous membrane of the stomach has a more intensely red color than that of the œsophagus. When fully expanded, the former appears as a smooth membrane; more frequently, however, it presents more or less deep fossæ and folds, and even larger ridges. The vessels under the mucosa, with their characteristic branches, are plainly visible. The different motions of the stomach conform with those mentioned

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above as being noticed in the œsophagus; the pulsatory are due to the aorta, and, through the diaphragm, to the heart. The same pulsatory motions, such as in the œsophagoscope are caused by the aorta, are transmitted also to the gastroscope.

Regarding morbid conditions of the œsophagus, the following have so far been examined with the aid of this instrument: two cases of carcinoma, causing stricture above the cardia; a foreign body in the upper thoracic portion; compression in the lower thoracic portion by an aneurism of the aorta descendens, which had not been recognized before the examination (here the motions noticed were strong, heavy pushes); two cases of cicatricial strictures; one case of injury of the mucous membrane due to a piece of a bone swallowed; and, lastly, a case of ulceration above the cardia and one such of the uppermost part of the œsophagus.

Later experiments have proved that the impediment caused by the trachea and the constrictor pharyngis inferior can better be overcome when, instead of a mandril, an elastic bougie is taken which corresponds to the size of the tube and has a conical point reaching from five to ten centimetres out of the œsophagoscope. The bougie opens the passage, and it is often possible in this manner to overcome easily the impediment mentioned without the necessity of having recourse to narcotization. When its object has been achieved, the bougie is withdrawn and the mandril put in its place. The same procedure, however, will not answer for the gastroscope, and here the hypodermic injection of morphia is considered to be the best means of surmounting the difficulty.

With reference to morbid conditions of the stomach, there is especially one which, since the employment of the gastroscope, has been greatly elucidated, and, one might say, rendered clearly understood only with the aid of this instrument,—viz., dilatation of the stomach due to chemical changes. Most of our knowledge of this disease we owe to the investigations of Dr. B. Naunyn.* He correctly states that, in a diagnostic as well as in a therapeutical direction, mechanical moments have been placed far too much in the foreground, and this has been done at the cost of chemical causes. Cases not rarely happen where the great curvature of the stomach descends far below the umbilicus, but, without its being correct to speak of dilatation of the organ, and *vice versa*, symptoms are frequently noted which generally are met with only in the latter disease, while no enlargement of the organ can be demonstrated. All these forms can, however, be explained, if we attach the main importance to stomach-fermentation, which can be easily recognized by the microscopical appearance of different microphytes that are obtained by the introduction of the gastroscope or a bougie, to the end of which sticks the mucus containing the sarcinæ or other fungi. The presence of the latter always proves that while the motor power of the stomach has become insufficient, this is not the primary cause of the evil, the latter being, *a priori*, induced by the altered chemical action. No remedy indicated for dilatation of the organ will here establish a cure, but washing out of the stomach with disinfectants (carbolic acid gr. i to gr. ii ter die) will soon remove all morbid symptoms. How great the anatomical changes may become in consequence of primary chemical alterations has, with reference to another organ, —the kidneys,—been proved by Aufrecht,† who succeeded by subcutanéous injections of cantharidin, which he made in animals, in producing all the different varieties of diffuse nephritis, and in each case the primary lesions were changes in the epithelium of the parenchyma induced by a peculiar affinity of the latter to the cantharidin, and ending in cirrhotic or atrophic kidney.

The last, though still an important result, which has been achieved by the aid of the gastroscope, is due to the fact that with this instrument the digestion of a small quantity of albuminous matter may be satisfactorily studied. Certainly the whole arrangement of the gastroscope, the necessary presence of a certain amount of atmospheric air in the stomach while the examination is going on, the comparatively limited area which at any one time may be inspected, and other reasons too apparent to need mention, exclude the possibility of studying the changes in any large quantity of albuminous aliment while its gastric digestion is going on. But if the quantity is small, the process mentioned may be

* B. Naunyn, Ueber das Verhalten der Magengährungen zur mechanischen Mageninsufficienz: Deutsches Archiv für Klin. Medizin, xxxi. p. 225.

† Allg. Med. Central Zeit., January, 1883, No. 2.

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thus studied. In this connection, the investigations of A. Mayer* are very interesting. With the idea that in this manner the real assistance which pepsin (either alone or in conjunction with an acid artificially added to the normal gastric juice during the stage of digestion) bestows upon albumen undergoing its change into albuminose may be better studied than by methods hitherto employed, he instituted a series of observations which we shall mention directly. There is perhaps no physician who, at some time or other, has not prescribed pepsin with the laudable intention of fostering digestion, but there is also perhaps no physician who, even when employing the remedy in other cases under similar circumstances, has not been disappointed in the result gained. It has been found that if, for instance, a small quantity of the white of an egg with a given dose of pepsin has been introduced into the stomach of a human being, and if within about an hour the digested matter is inspected with the gastroscope, the result will vary greatly, according to the dose and the preparation of the pepsin, and according to the quantity of acid added or the absence of the latter, in one and the same person; *i.e.*, while at one time digestion will be finished, at another it will hardly have been commenced. Mayer's experiments tend to solve the problem, and they merit an extended mention, as they possess practical value concerning the administration of pepsin.

He prepared the pepsin himself from the mucous membrane of the stomach of the hog by the aid of glycerin, precipitating the extract with alcohol, washing the precipitate with alcohol and drying with sulphuric acid. As objects of digestion were used thin cylinders of coagulated white of egg, these having been obtained by pouring the liquid and raw albumen into small glass tubes and then placing the latter into hot water. It is apparent that were equal pieces cut of these threads it was certain that the effect produced depended, as far as the albumen was concerned, upon equal conditions. While it would lead us too far were we to give the experiments in detail, especially as the latter can be guessed, we will briefly communicate the results which Mayer gained. These were as follows:

1. Pepsin dissolved in acidulated water and heated up to 55°–60° C. becomes inert. The albuminous threads digested in such a solution appear somewhat broken up, but no peptone can be demonstrated. In the stomach the digestion goes on more slowly, as if the addition had not been made. This fact shows that in making pepsin solutions too great a heat should never be employed, as otherwise their effect is destroyed.

2. The rapidity of digestion depends, *cæteris paribus*, upon the quantity of the pepsin: 0.02 grm. pepsin caused digestion within five hours and twenty minutes, 0.001 grm. in fifteen hours and five minutes. Quantities between them required six, seven, and twelve hours.

3. The most favorable temperature for digestion was near 55°,—therefore very near the temperature at which the pepsin becomes inert. The acidulation was made in this case with five per cent. of fuming muriatic acid.

4. The development of bacteria in the solution does not in the least decrease the effect of the pepsin.

5. The percentage of muriatic acid in the fluid is of far more importance, as regards rapidity of digestion, than the variations in the percentage of pepsin. While in case the percentage of pepsin was reduced one-half, the time necessary for digestion increased from five hours twenty minutes to six hours twenty minutes only, a solution containing 0.23 per cent. HCl was necessary to establish digestion within five hours and fifteen minutes; but if the solution contained 0.09 per cent. HCl, the time needed to perfect digestion was twelve hours and twenty-five minutes, and if it contained 0.05 per cent., hardly any effect could be noticed within fifteen and a half hours.

6. For the muriatic acid a series of inorganic and of organic acids was substituted, always in an equivalent quantity, and by trituration with sodium the salt conformed to a muriatic acid of maximum effect. The result of these investigations was as follows: time necessary for digestion —muriatic acid, three to five hours; nitric acid, five hours; oxalic acid, thirteen; sulphuric acid, nineteen. Each experiment was interrupted after a period of twenty-four hours. Lactic acid and tartaric acid evinced during this time a decided impression; formic, benzoic, and acetic acid had

* A. Mayer, Einige Bedingungen der Pepsinwirkung quantitativ studirt, Ztschrft. f. Biol., xvii. p. 351.

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less—but still a noticeable—effect. Butyric and salicylic acid had caused during this period no visible alteration. It may be mentioned that the pepsin employed was perfectly free from chlorides.

From these carefully-instituted researches we learn that pepsin, while it is not necessary to increase greatly its dose to enhance its effect, should always be administered with a decided dose of an acid,—and here we gain the most certain result with muriatic acid,—if it is our purpose to facilitate and to cause a more rapid digestion in the stomach, and that, while the temperature present during digestion in the latter organ is the one most favorable for the change of albuminoid bodies into peptones, we should insist upon any preparations of pepsin we employ being prepared without heat, as a temperature of 56° is known to destroy totally its digestive power.

In conclusion, we will mention another series of experiments which were instituted since the therapeutics of diseases of the stomach have been given a new impetus by the introduction of the gastroscope, and which, like those mentioned last, have also an eminently practical value, as they enlighten our views on an every-day occurrence,—viz., those of A. Düsterhoff.* Many physicians, when prescribing iron preparations, advise their patients, for some reason or other, to take such medicines either immediately before or after a meal. In this connection Düsterhoff's experiments are very instructive. He digested twenty cubic centimetres of artificial gastric juice and one gramme of fibrin with equivalent quantities of different iron preparations. After drying, the precipitated fibrin was weighed, and the quantity of the syntonin dissolved determined. The difference resulting indicated the quantity of peptone formed. The time of digestion in one experiment lasted three hours and ten minutes; in another, seven hours and a half. The addition of metallic iron in the first series of experiments amounted to 0.00614; and of pyrophosphate, muriate, and lactate of iron the same quantity was taken. In a second series other iron preparations were employed: the addition here regarding the quantity of metallic iron amounted to 0.0077 gramme. In a third series white of egg was used. Here the quantity of albumen which after digestion could be precipitated by boiling was determined.

All these experiments proved that the iron salts of organic acids disturb the pepsin digestion in a very high degree. It may be supposed, to judge from these investigations, that the muriatic acid of the gastric juice takes the place of the organic acids. We know, however, from the experiments of Mayer, that the latter acids cannot be compared, regarding their effect on digestion, with muriatic acid, so that a direct loss takes place whenever iron preparations are given at a time when the gastric juice is poured out for the purposes of digestion. But that this fact does not alone cause the disturbance induced by iron preparations in digestion is shown by the unfavorable influence which is exerted in the same direction by muriate and pyrophosphate of iron. Reduced iron, being dissolved in the gastric juice, absorbs also a part of the muriatic acid, but the amount dissolved of reduced iron as well as of pyrophosphate of iron is not great.

Düsterhoff's experiments teach us, therefore, never to prescribe any iron preparation together with pepsin, never to administer such remedies as the former at meal-times, but, in case we should be forced to do so on account of a special sensitiveness of the stomach, rejecting iron at any other time than while digestion is going on,—and we know of such cases,—it is best to prescribe either the reduced iron or the pyrophosphate of iron immediately after meals, and to administer at the same time a sufficient dose of pepsin and of muriatic acid to the patient at the beginning of the meal. We would thereby serve a double purpose,—facilitating and increasing the rapidity of digestion, and supplying the gastric juice with a surplus of muriatic acid, which may suffice for the solution of the iron salt. That the addition of some pure, bitter remedy, as gentian, etc.,—a practice so frequently made use of in the prescribing of iron preparations,—has a scientific basis we also learn from these investigations. The bitter drug stimulates the stomach to an increased secretion of its juice, and in this way the extra quantity of muriatic acid is poured out to unite with and dissolve some of the iron preparation without depriving the gastric juice of the quantum necessary for the digestion of albuminous principles con-

* A. Düsterhoff, Ueber den Einfluss von Eisenpräparaten auf die Magenverdauung, Dissert., Berlin, 1882, Centrlbl. f. d. Med. Wissensch., 1882, 145, p. 807, E. Salkowski.

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tained in the food eaten. The injurious effect of iron salts on digestion has long been known, but it was usually ascribed to the astringent properties of the iron, as we were aware that tannic acid will precipitate pepsin and make it inert.

NOTES FROM SPECIAL CORRESPONDENTS.

CHICAGO.

AT the last meeting of the State Board of Health the report of the Secretary was read, giving some interesting facts for the past quarter. There were one hundred and fifty-two certificates issued to incoming practitioners, and three to midwives. Of six candidates presenting for examination in obstetrics, but one passed. There are now six hundred and fifty men practising medicine in the State who have not received any training or medical degree. This shows commendable work on the part of the Board, as there were, six years ago, about three thousand eight hundred non-graduates. The Secretary calls attention to the fact that some of the colleges do not come up to the requirements of the Board in the graduation of candidates,—indeed, not even to the requirements which they—the colleges—advertise. The working of five colleges is now under investigation, and it is not unlikely that some of them will be placed upon the black list. In one of the five "schools" three chairs are represented by one man, and he signs the diplomas as professor of anatomy, physiology, and hygiene. The United States Medical College of New York is considered as unworthy of recognition by the Board.

Some startling disclosures have been made as to the disposition of the county dead. The county undertaker has been charged with disposing of about eighty per cent. of the dead to medical colleges and at the same time collecting the usual amount of the county for their interment. The shocking part of all this is the treatment of the bodies before final disposition is made of them. They defeat recognition of remains by friends through the substitution of other bodies than those sought, and, when removing bodies for interment or other purposes, they have been thrown, to the number of two or three, in one box in a perfectly nude condition, whites and negroes together.

Efforts are being made to secure separate provision for our criminal insane. A committee of the legislature has reported favorably for the erection of an asylum in connection with the Chester prison, and it is altogether probable that the measure will be carried out. There are certain objections to the plan, not considered by the committee, the principal one of which is the insalubrious character of the proposed location. Chester is situated in the Great American Bottom, a portion of the southwestern end of the State notorious for its malarious character. The town is also very isolated, and an institution located there would be beyond that wholesome observation which is always a safeguard against abuses.

One of our physicians has been engaged in an examination of the atmosphere of the city, with a view to determining the influence of certain manufactures upon the health of localities. He claims that the presence of a number of breweries in a given locality prejudices the health of that part of the city by abstracting a large amount of ozone from the atmosphere; but the fact is that the localities thus designated compare very favorably, in the mortuary tables, with other districts of the city.

Dr. Brockholst McVickar, who has practised medicine in this city for thirty-five years, has retired. During the past year his health has become so much impaired as to necessitate continued rest.

CHICAGO, April 24, 1883.

CORRESPONDENCE.

LONDON LETTER.

QUALIFICATIONS FOR PRACTICE.

ONCE more the attempt is being renewed to enact a bill in Parliament which shall deal with the medical profession,—*i.e.*, satisfactorily. Ever since the writer can remember anything, there was a talk of a medical act which would redress the grievances of the profession. Now the Medical Act of 1883 is being attempted, with what prospects of success remains to be seen. It may help the reader to understand the position better to look at the matter historically. Before 1815 no qualification was required in order to practise medicine: it was a pure matter of contract. Yet by the medical account tendered to a great-grandmother of mine for attendance upon her husband, who died from a carbuncle, possibly aided by the treatment, the medical man in 1796 got pretty much the same amount that he could have done at least in 1870. Possibly the account of the present time does not enter into details, as "a large box of Basilicon [ointment], fourpence," or "Two doses of physic, daughter Mary, fourpence," while "To enlarging the incision on ye neck, nothing," which last would probably have some cash equivalent nowadays.

The usual thing was for a youth to serve an apprenticeship to some man of repute, and pick up what he could, and start practice in his turn. It is quite clear that such a scheme made small allowance for a knowledge of anatomy; but that was of little moment, as

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fractures of limbs and dislocations fell to the share of the local bone-setter,—usually a craftsman skilled in the use of his fingers, with fellow-workmen around taught to pull steadily on a dislocation,—an individual scarcely yet extinct. Midwifery mainly fell to the midwife. The medical man was essentially an apothecary, made up medicines and prescribed them, interfering little with his neighbors the bone-setter and the midwife. If an ambitious youth, he served in the navy, and saw something of surgery, as well as other practice, after which he settled down as a superior practitioner, equal to cutting off a limb or operating for hernia when such skill was called for. This seemed to do all very well, but the advance of the times caused a step to be taken which upset the old standing arrangements. The medical man must carry a legal mark upon him by which he could be recognized. So in 1815 an act was passed that all persons not already actually engaged in practice must possess a qualification. "In practice before 1815" was common enough in the Medical Directory in the early years of its existence, but it has ceased now. The license of the Apothecaries' Hall was the great qualification after that time. The medical man understood how to compound drugs, and administered them. The qualified man now looked down upon his whilom confederates the midwife and the bone-setter, who only studied under some notable proficient, but who passed no examination. The College of Surgeons and the College of Physicians existed as corporations granting diplomas, but they had little to do with the profession at large; indeed, the latter college was a select one of members and fellows up to a very recent date, when a licentiate qualification was added. A man was a licentiate of the Apothecaries' Hall; that was the first qualified medical practitioner. After a while more ambitious men worked hard at anatomy and became members of the College of Surgeons; then this became quite usual. There were still many things which required looking to, and none more than some entrance-examinations. Men were allowed to study medicine on paying their fees, and passed an examination in Latin before they were allowed to pass any professional examination. Consequently, all idle fellows who had tired out the patience of their relatives when brought to book made a new start by studying medicine, reading up their Latin as best they could amidst their more technical studies. The medical student was the scapegrace of society. He lived away from his friends, and cared little for public opinion about him, and as a consequence got into scrapes, was fined, and nobody cared. The result of this was that whenever any man was had up before the magistrates he returned himself "medical student," and no further inquiries were made; the fine was inflicted, and he was dismissed, the magistrate probably thinking he had some decent friends somewhere who would be grieved at seeing him in the dock if they knew of it. When the act of 1858 rendered a preliminary examination absolutely essential for entrance upon a course of medical study, the whole of these questionable medical students were swept away, and with that the odium for reckless conduct which had attached to the medical student. Of course young men are young men, and when they are gathered together away from home-ties are apt to be "young men;" but the medical student of the present is a gentleman, and if treated as anything else sharply resents it. As to the variety of portals to medicine, a list of them was given a few months ago: there are English qualifications, Scotch qualifications, and Irish qualifications. There are considerable variations in the quality of these qualifications; which were then pointed out. But once through any portal the "qualified man" could do as he liked, and practise any or all departments of the medical art. All stood on the common ground of being qualified and legally equal. Of course this occasioned heart-burnings: the man who had studied honestly at great expense of time and money saw himself no better off than his neighbor who had struggled through an examination of some kind, and who perhaps took the lead of him by dint of a more thorough acquaintance with human nature. (This last is a factor in success which no scheme of education is likely to thrust aside.) The man who can impress a patient will ever keep ahead of the man who may have the knowledge but who cannot make the impression. There is no law of man by which honesty can be gauged in the relations of patient and medical man. The right-minded, honorable man says to himself something like this: "When a patient places confidence in a member of the profession, puts his life, his health, the prospects of himself, and maybe those also of his wife and children, in his hands, the least he can do in turn is to meet him with common honesty. If he be not entirely deserving of the confidence reposed in him, let him try to be worthy of it by doing his best. How much, however, does 'doing his best' involve? It involves all that lies in his power, each man to the very best of his ability, for unto whomsoever much is given, of him shall much be required. 'Doing his best' is taking all possible pains, which includes such information as may be attainable. Avoidable ignorance is not a worthy return for confidence." But the selfish man just looks to see how he can consult his own interests, with quite secondary feelings towards his patient. Of course no act of Parliament can admit the sheep and exclude the goats, but things are going to be a little more equalized; that is, provided the bill becomes law. The Medical Acts Amendment Bill is now before the House of Lords. It

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Although this drug is also classified as a diuretic, it is likewise, in conformity to a well-known physiological law, when the surface is kept warm, a diaphoretic. Illustrations of this dual action of drugs are furnished in the case of other diaphoretics, as, for instance, sweet spirit of nitre, etc., which act on the kidneys or the skin accordingly as the latter is kept warm or cool. Given in the form of a warm infusion, and with the patient's surface kept properly warm, Sierra Salvia is an active diaphoretic, and is especially indicated in the case of the eruptive fevers. Its diaphoretic action is notably more decided than that of any of the warm vegetable infusions popularly employed.

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having the same high digestive power as the amylaceous; it will be sent only when specified.

Boudault's Pepsine is sold in bottles of 1 ounce, with a measure containing exactly 5 grains; also in bottles of 4, 8, and 16 ounces for dispensing.

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In this preparation the taste of Pepsine being perfectly disguised, it may be recommended to persons who have difficulty in taking Pepsine in the form of powder.

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deals first with admission to medical practice, —that is, to the placing of the name on the Medical Register, instituted by the act of 1858,—and also deals with possessors of genuine foreign and colonial qualifications. Then it proceeds to "the establishment of medical boards" throughout the United Kingdom for the granting of qualifications after certain examinations are passed. As stated in a previous letter, the profession is ruled by the General Medical Council, the bulk of whom are representatives of the different corporations granting medical licenses to practise, who show a tender solicitude for the interests of these corporations. Then these corporations choose their own examiners. In fact, the corporations are the masters of the situation so far, and the medical candidate must submit to what they may choose to determine. Direct representation of the profession as a collective body has been actively urged, but remains yet unfilled, being still only in the bud. The attempt is going to be made at the next annual meeting of the British Medical Association to make its rulers direct representatives of the members, instead of being ex-presidents to such an extent as to neutralize all energetic action; and after that is achieved, perhaps direct representation in the General Medical Council may follow. Anyhow, this new bill proposes to have medical boards, one for each division of the kingdom, consisting of representatives of the different licensing bodies, all knocked into one; and these are to examine all students, so that something like homogeneity may rule. Each medical board shall be renewed every five years by the whole of the members retiring, apparently without their being eligible for re-election. This clause shows the wholesome fear which obtains as to the constituents of the boards putting their heads together and constituting themselves a clique, after the manner of oligarchies, if not sharply looked after. The medical boards are to regulate their examinations subject to the control of Medical Council and Privy Council. They are to hold examinations and grant qualifications to men and women alike. So we will be rid of the medical woman grievance, which will be a mercy! Male and female alike are to have the title "Licentiate of the Medical Council," which has for the future to be the legal name of a medical practitioner. Beyond this "medical qualifying title," any one may take further "medical higher titles," which includes "any title indicating or implying the grant of a diploma which may appear to the Medical Council to have been granted after examination in respect of a substantially higher degree of knowledge than is required to obtain a qualifying diploma under this act, or a diploma which has been granted as a testimonial of special distinction, and appears to the Medical Council to deserve recognition as a higher medical diploma." Those bodies who grant diplomas which the Medical Council does not choose to regard as a "medical higher title," if they feel themselves aggrieved by being thus sat upon, may appeal to the Privy Council, who can redress, if so disposed, the wrong done to the injured body. In this may be seen the prospect of some pretty little squabbles in the future, on which opinions may differ considerably. Then if any one is entitled to be a midwife, or a dentist, he or she may be such, but he or she is not to palm himself or herself off as a qualified "Licentiate of the Medical Council" upon an unsuspecting clientèle without being liable to fine, to be paid in purse or person. Of course considerable modifications may be expected from the threatened corporations, especially those whose qualifications will not, probably, be entered in the list of "medical higher titles" should this bill pass. The profession generally seem to think favorably of the proposed bill, and the Medical Reform Committee have a petition in preparation in support of it. It is strongly urged on behalf of the bill that, if it do not pass, any prospect of medical reform is thrown into the next century. If this really be a well-founded apprehension, then the conservative corporations will have to face the reformers aided by all the enthusiasts who desire to see the portals of medicine thrown open to women, a body whose enthusiasm and energy will not be without considerable influence on the result. Of course the objectors bring forward the oddest reasons for their conduct, even to the allegation that such a scheme will lower rather than elevate the profession. The Royal Commission some time ago appointed to inquire into the state of matters medical has strongly pronounced against the present inequalities of the license examinations, and the proposed bill is the outcome of its labors. Under the present scheme the visits of the General Medical Council to the examinations of the present licensing bodies will be a real investigation of their practices. Further, the General Council will consist of so many representatives of the license-granting corporations, but as collective representatives, not as representatives of individual interests with which they are identified. Under these altered circumstances the six Crown nominees will be able to exercise a much more pronounced influence than they could when each representative fought tooth and nail for the interest which sent him to the Council. The profession will have to arouse itself to see what its weight in the body politic of the State is. Perhaps it may be influential, perhaps it may not. Much will depend upon the private medical attendants of statesmen, and certainly very much upon what is done by the leading medical men who see much of peers and legislators. Wires of all kinds will be pulled, so far as they will pull. All kinds and sorts of arguments will be used. Perhaps the value of the

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profession to the public will be realized vividly, or the tenets of the peculiar people who follow St. James, and pray while anointing with oil, will obtain further support. (The medical man who works up a practice by cultivating a certain congregation, and also uses prayer as a means to a concrete end, is much nearer the practice of St. James than may be pleasant for his patients to contemplate at times.) Anyhow, we will see what the profession can do for itself; also what the popular representatives at St. Stephen's are prepared to do for it. That the profession has often blundered in its own self-government must be admitted, and medical men are not all good business-men; consequently a little outside help may not be amiss. Indeed, if what appears in the medical press is any approach to what actually goes on—for their meetings are held in camera—in the College of Physicians, some scheme for a conjoint arrangement with the College of Surgeons was so inexplicable that a writer signing himself a "Puzzled Fellow" says, "It seemed to me at the meeting that most of those who took part in the discussion did not understand the full bearing of the question any more than yours, etc." This means, if it means anything, that those who took part in the matter did not fully comprehend what they were talking about, and that if there was any one present who did properly understand the subject he kept out of the discussion. Now, the medical press often girds at the old lady in *Pall Mall*, who seems not only venerable but infirm; but if this be the style of its discussions it is evident that no amount of social respectability will preserve a body, individual or corporate, from such intellectual laches as cause the world to scoff. In mercy, then, to our obvious inability to provide for ourselves, the collective wisdom of the British nation, as represented by hereditary and elected representatives, is going to help the medical profession; and if it is really true that if something be not done now nothing more will be attempted this century, it is to be trusted something will be done. Those who flatter themselves that they are moulding history had better bestir themselves, else the opportunity may slip past them, being "bald behind," and may never come again in their lifetime. Of course sundry busybodies are trying to make themselves of importance at this time. The most influential member of our profession, Sir William Jenner, is detained at Windsor in attendance upon the queen, who has had an accident which threatens to bring on some acquaintance with gout, to which the house of Hanover seems, like the Stuarts and the Tudors, to be liable. Still, there are many others who are in the position to exercise much influence upon those by whom our laws are made, and doubtless they will use that influence wisely and well. There is much to be done in Parliament this session in consequence of the time which has for the last two years been given to Irish affairs, but, as the informing and hanging stage is now well established, it is to be hoped Ireland will settle down into peace and prosperity and allow other affairs of the United Kingdom to be legislated for. So far from striking terror into John Bull by dynamite, a lady remarked calmly the other morning at breakfast, "I suppose these dynamite outrages will become fashionable this season," as if she were speaking of some new arrangement of wearing-apparel. If, then, the bill has to have a chance of passing, the profession will have to put its shoulder to the wheel and make a united effort. The time is ripe, has long been so, for something to be done to equalize the examinations all over the land. The favorite argument of the licensing bodies who have been charged with being below the mark in their examining-tests has been this: "There are many areas which it will never repay a highly-educated medical man to settle in, and which must therefore either go without a medical man or accept an indifferently-educated man;" in other words, the "half a loaf is better than no bread" argument. As, however, once through a portal the medical man can go anywhere, the argument has a good deal to be said against it. And certainly the class of men entering the profession is socially higher now than it used to be. Many men who belong to good families and possess certain private means now enter the ranks of medicine with the intention of becoming specialists in easy departments, as eye or ear, who, from want of bodily vigor, in many instances, would never have thought of being medical men in general practice, and who would a generation ago have in all probability found a sufficient occupation for their energies and some addition to their incomes by entering the Church. Of course such men form a strong contrast to the energetic men of small means who struggle into the ranks of medicine and who strive after a large practice. The meditated bill, if it becomes a law, will blight the hopes of many an aspirant for a medical qualification, as well as those of the corporations who find it remunerative to carry on their examinations with regard to the needs and requirements of comparatively poor neighborhoods.

J. MILNER FOTHERGILL.

THE THIRTY-FOURTH ANNUAL SESSION OF THE PENNSYLVANIA STATE MEDICAL SOCIETY will be held at Norristown May 9, 10, and 11, 1883. A very full programme has been issued, and a large attendance upon the meeting is anticipated. The Montgomery County Medical Society will give a banquet to the Medical Society of the State of Pennsylvania on the evening of May 10.

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PROCEEDINGS OF SOCIETIES.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

A CLINICAL conversational meeting of the Society was held at the hall of the Society, March 21, 1883. Dr. De Forrest Willard read a note of a case of "Fæcal Impaction of Four Months' Standing" (see page 533).

DISCUSSION ON IMPACTION OF FÆCES.

Dr. Eskridge said that the case was very remarkable, and, if it were not for the fact that similar ones are on record, we might hesitate to believe it. Flint refers to a case of a patient whose bowels were opened at intervals of rather more than eight months. Other instances of shorter periods, such as one month, are on record. A case, which has attained some notoriety, exists in this city, in which a period of five months, or sometimes even longer, is said to elapse between the movements of the bowels. Dr. Eskridge has recently examined this patient, a woman, who claims to have vomiting of fæcal matter once in about four to eight weeks, and discharges from the bowels at intervals of four to six months. He believes her to be an impostor.

Dr. Blackwood referred to two cases of constipation which he had. The one, a young woman, had the bowels moved only once in ten days; the second case is the mother of the young woman, and at first had passages only once in three weeks. Conditions of this kind can be corrected by education,—that is, by training the bowels to regular action at certain times. In both these cases material benefit had resulted from such practices: the mother is now entirely normal, and the daughter has been brought to an interval of two days only between the movements of the bowel. The prior condition, however, in which the long intervals existed did not seem to influence unfavorably the health of either patient.

Dr. O'Hara thought the band across the intestine was not the cause of the constipation, as there was room enough for fæces to pass. The condition was due to the torpor of the intestine, which could be aroused to action by functional stimulants. He had, some time ago, seen a child, eleven years old, in whom no regular movement of the bowel occurred for some months, so that finally the abdomen became swollen like that of a pregnant woman, although a diarrhœa-like discharge occurred every day. The diagnosis was exceedingly obscure, there being a general enlargement with diarrhœa. He finally succeeded in inserting a long tube into the intestine, and got away quarts of fæcal matter, which also revealed the diagnosis. The condition recurred after a time, but was easily cured. He wondered, in the case reported, that there were no discharges whatever for such a lengthened period, and would venture the paradoxical remark that one symptom of obstipation of the bowels is diarrhœa.

Dr. Wilson said he desired to call attention to a clinical fact that where obstinate constipation exists it is not uncommon to find a dilatation of the rectum and a patulous anus; associated with these conditions will be a sort of diarrhœa from intestinal catarrh. He has seen in post-mortems two cases of intestinal bands. These were the result of previous inflammation in or near the intestine, and had caused obstinate constipation. It is not necessary that the constriction should be great, in order to interrupt the peristaltic wave. We must bear in mind that after perityphlitis secondary dangers may arise from the development of intestinal obstruction.

Dr. Willard said, in answer to a question by Dr. Baldwin, that he saw the case only towards its termination, but that he had stated in the history that cathartics had been regularly used by the patient for many years. In the paper he had neglected to speak, as he had originally intended, of the diarrhœa of constipation, which usually exists in cases like the present, but was absent, so far as he knows, in this instance. The fæcal matter seems to act as a foreign body provoking intestinal catarrh, and the secretion finds little difficulty in trickling down between the walls and the solid contents. In the dissecting-room he had seen instances of inflammatory bands constricting the intestine without dilatation. One remarkable instance he had presented to the Pathological Society some twelve or fifteen years since. In the case under consideration, the constriction was probably congenital, as the constipation had existed from birth.

SPECIMENS OF ANEURISM OF ARCH OF AORTA AND OF RENAL ABSCESS, WITH NOTES OF THE CASES.

Dr. Vogler read the following notes of cases, and exhibited the specimens relating thereto.

I desire very briefly to call the attention of the Society to two interesting pathological specimens,—an aneurism of the arch of the aorta, and a tuberculous renal abscess. The patients from whom these specimens were obtained were under my care at the German Hospital.

Mary L., widow, aged 35, was admitted into the house February 24, suffering with the following symptoms:

A pulsating swelling in the front of the chest, immediately over the arch of the aorta; a distinct murmur on auscultation; a perceptible thrill in the enlargement; and all the signs of pressure, such as cough, pain, dyspnœa, difficulty in swallowing, etc. Death occurred rather suddenly on February 28.

Post-mortem examination.—Emaciation not very marked; extensive effusion in right pleural cavity; recent pleuritic adhesions, covering an area of three square inches, upon same side; lungs emphysematous, save some

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chronic indurations or thickening at the base of the left lung; no signs of tubercular disease; the heart was displaced downwards and to the left; the aneurism of the arch was divided into three pouches or cavities, as shown in the specimen before us, each containing a firmly-organized clot. The size of the aneurism was about equal to the size of the heart itself. At the upper part of the sac, where the force of the blood was spent after each pulsation of the heart, a marked thinness and abnormal condition are noticeable, which, no doubt, would sooner or later have been ruptured, resulting in immediate death from hemorrhage. No valvular disease; though extensive aortic valvular disease was supposed to have existed during life, by the loud murmur produced by the blood rushing over the uneven surface of the clot so near the aortic valves.

Tuberculous Renal Abscess.—This specimen was removed from a male subject, a clerk by occupation, aged 32 years. He was admitted into the hospital December 17, 1882. Previous to his admission he had been under the care of a professional friend, who treated him for Bright's disease.

Some three years ago, he had a severe attack of pneumonia, from the effects of which he never fully recovered, and slowly the usual train of symptoms of tuberculization of the lungs set in. Secondarily, I believe, the kidney-affection came on, and the destructive change shown by the lesion was comparatively rapid, and the cause of death by exhaustion.

Briefly, the chief symptoms were great emaciation, frequent micturition, passing between forty and fifty-five fluidounces daily, pain in the lumbar region, and hectic fever. No uræmic convulsions.

The temperature-sheet shows the characteristic fall and rise, the latter frequently sudden and startling.

Microscopic examinations of the turbid urine indicated the severe nature of the disease, by the granular débris, shreds of connective tissue, disintegrated mucous membrane, etc. The urine was always albuminous, but variable in amount.

Post-mortem examination revealed extensive tuberculization of the lungs, and in the apex of the right lung (specimen shown) several cavities are noticeable.

The left kidney (specimen shown) shows the destructive change previously alluded to: the cavity of the abscess contained from one and a half to two fluidrachms of pus. In close proximity to the above lesion may be detected tubercular points. The right kidney was normal. Other organs healthy.

SPECIMENS OF MEMBRANIFORM EXUDATION OBTAINED FROM A CASE OF PURULENT PLEURAL EFFUSION.

Dr. J. C. Wilson exhibited specimens of membraniform pleural exudation removed during treatment from the chest of a child, three and a half years old, suffering from purulent pleural effusion. The case had resulted successfully after treatment extending over the course of about five weeks. The strips of exudation shown were, although contracted by the preservative fluid, of considerable size, being $1'' \times 2''$ in diameter and about $\frac{3}{16}''$ in thickness. They were of a whitish color, and presented the usual microscopic characters of such inflammatory exudations. They were merely samples of very considerable quantities of tough membranous masses that had from time to time been removed through the opening in the chest-wall during the course of the treatment, and, though possessed of no special interest in themselves, were shown as illustrations of an occasional complication of the treatment of such cases.

In the case in question, the presence of this false membrane had not only interfered with the escape of the fluid at the time of the operation, but had also subsequently very frequently blocked the soft catheter used, and on several occasions necessitated its removal and the use of forceps to clear the fistula. On these occasions masses of considerable size had been often extracted.

Dr. Willard said large aspiration trocars should be used. He had once been very much chagrined, on having inserted a needle, at getting no flow, although he was sure pus was present. He then cleared the canula, and got a free flow for a moment, but this stopped. He terminated the operation by laying open the cavity. He had seen the same obstructive effect from shreds of tissue in cold abscess of the joints. In post-mortems he had seen the pleural cavity nearly filled and divided by lymph bands, sometimes very beautifully looped, like lace, and these could safely be drawn into the tube. Every means should be at hand for clearing the canula.

Dr. Wilson, in closing the discussion, said, in answer to a question, that the case reported did show slight œdema of the lower chest-walls on the affected side, but that after the operation and during treatment the œdema disappeared. During the latter part of the treatment, however, the pus ceased flowing for a time, and then, although the heart had returned to its place, the pulse and temperature increased and marked œdema developed. He introduced a probe and caused the pus once more to escape. The œdema again promptly disappeared; the sinus afterwards healed permanently, and the child got well.

SPECIMENS FROM A CASE OF PHTHISIS, WITH GREAT LOCAL THICKENING OF THE PLEURA, AND CONGENITAL DEFICIENCY OF THE PERICARDIUM.

Dr. Edward T. Bruen read the following notes:

The specimens which I propose to exhibit include the lungs, the liver, and the heart

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from a case of phthisis, with great local thickening of the pleura.

The portion of lung principally affected by the phthisical process is the upper left lobe. The anterior inner margin is permeated by bands of cicatricial tissue, and to the depth of six inches the tissue is fibrous, tough, and dense. Alterations of a similar character occupy an area about five inches vertically by four laterally. Over this mass, and between the first and fourth ribs at the right border of the sternum, there was a swelling caused by the bulging of the ribs produced by subcostal pressure. Beneath this mass the lung-substance has been extensively destroyed by the desquamative pneumonic process. In the upper lobe there are several cavities. The other two lobes upon the right side contain some diffused nodular masses of a phthisical character, but in the main the pulmonary tissue is physiological.

Now, the special feature of interest from a pathological stand-point is that the phthisical process probably developed itself from the pleural disease. The clinical history substantiates this view, since the first symptoms of chest-trouble dated about eight years prior to the death of the patient. These symptoms were pain in and around the chest, with shortness of breath, accompanied by asthmatic attacks. The advance of the disease for over seven years was slowly progressive, the cavities having formed only during the last six months of the patient's life. There was also a family record entirely free from tubercular or scrofulous taint. The second interesting feature is that the local pleural thickening suggested during life either an aneurism, a tumor arising in the mediastinum, or an encysted purulent collection which was undergoing absorption. Briefly speaking, the usual signs of aneurism, such as murmur, pulsation, thrill, or pressure-symptoms, were absent, and there was no specific history or other cause of arterial disease. The patient's age, which was 32, the absence of cachexia, the duration of the illness,—nearly eight years,—opposed the idea of malignant growth; and the absence of syphilitic history disposed of the hypothesis of gumma. The diagnosis resolved itself into the proposition that the tumor resulted from pleural thickening, or the same possibly enclosing a purulent collection in a state of partial resolution. These suggestions are favored by the fact of associated phthisis, and because the patient suffered from irregular chills with febrile movement. An exploratory puncture was made into the tumor, which demonstrated its solid character, and the diagnosis was positively established upon the first supposition. The further interest of the specimen centres in the deficiency of muscular tissue in the diaphragm and the congenital absence of the pericardium. The liver was folded upon itself and drawn up into the chest-cavity as high as the second rib at its outer portion. This could not have occurred if the diaphragm had been normal in structure. The absence of the pericardium permitted the heart to yield to the traction of the pleural adhesions, and the apex was tilted upward and to the left. Before death the apex-pulsation was felt in the fourth interspace, four and a half inches from the left border of the sternum. During life the altered position of the heart was ascribed to traction by the pleural adhesions, but the absence of pericardial tissue was not surmised.

NEW YORK ACADEMY OF MEDICINE.

A STATED meeting was held April 19, 1883, FORDYCE BARKER, M.D., LL.D., President, in the chair.

The scientific work of the evening consisted in the reading of two papers, the first by Dr. GASPAR GRISWOLD, entitled "*Note on Crystalline Elaterin.*"

The author first spoke of elaterium as being one of the best of hydragogue cathartics, but it had largely fallen into disfavor because of the great variation in strength of different specimens; it therefore became very desirable to obtain a preparation which could be relied upon in all cases, especially those of a critical nature, and he believed that such a preparation was that of Merck's crystalline elaterin, which was identical with that obtained by Morries in 1831. The difference in the method of manufacture, and the appearance of elaterium in its ordinary and impure forms, and crystalline elaterin, was described, and some cases in which the latter had been tried, in all with excellent results, were cited. The conclusions reached were: first, that the crystalline elaterin of Merck, now for sale in this city, is identical with that described by Morries in 1831, and is the active principle of elaterium; second, that its definite crystalline form, its freedom from impurity, render it more reliable than any preparation of elaterium; third, that the proper dose to commence with is one-tenth of a grain, and that this may be prescribed in a solution of one grain of elaterin to half an ounce of alcohol, or in the form of tablet triturates containing one-tenth of a grain.

The second paper was entitled "*Anteflexion of the Uterus: its Etiology and Associated Pathological Conditions,*" and was read by the author, Dr. W. GILL WYLIE, who opened his remarks with a description of the uterus and its anatomical relations in a state of health. He gave the average depth of the organ as a little more than two and a half inches. It was flexible, and when pressure was made upon its upper portion it bent, principally at the internal os, forming not an acute angle, but a curve such as would be formed by a rubber tube with thick walls and small calibre. The uterus was held in position principally by con-

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nective tissue, fascia, and peritoneal reflections, which formed more or less distinct ligaments containing a certain amount of muscular tissue, and which were sufficiently elastic to allow of mobility of the organ, especially in an upward-and-downward and backward-and-forward direction. The elastic contractility of the muscular structure of the arteries, of the ligaments, of the connective tissue of the skin, of the so-called cellular tissue of the pelvis, etc., exerted a pressure which he designated by the term *vital musculo-connective-tissue pressure*.

The dynamics of the pelvic cavity were considered, especially with reference to the influence of force in causing anteflexion. Atmospheric pressure has little to do with keeping the pelvic organs in place by opposing gravity. The influences which prevented the uterus from bending forward at or above its middle when the person was in the erect position, or when the organ was pressed upon by the force transmitted by the action of the diaphragm, abdominal muscles, etc., were—first, the firm and elastic nature of the organ, which tended to keep it in normal shape; second, its forward inclination and slight anterior curvature, which placed it in the best possible position to enable it to withstand both continued and sudden waves of force from the action of the diaphragm and the abdominal muscles; third, the influence of the vital musculo-connective-tissue pressure, or the sustaining power of the surrounding flexible and elastic adjustable tissues, which were filled with blood, fluids, etc. The uterus while surrounded by these elastic and adjustable tissues during life was sustained in the manner of a flexible sea-weed surrounded by water. Those who advocated the mechanical pathology of uterine displacements had overlooked this influence largely, and had, therefore, exaggerated the effects of sudden falls in producing anteflexion and the value of mechanical support in effecting a cure. The downward pressure on the uterus by the forces already referred to tended in its normal state to produce prolapsus rather than anteflexion. But when the organ was soft, the causes which tended towards flexion during the downward pressure of the diaphragm and the abdominal muscles were—first, the normal position of the organ, which was one of anterior curvature, and, when the tissues were soft, the weight of the fundus tended to increase such curvature; second, downward pressure would cause the pouch of Douglas and the bladder to yield first, which made taut the utero-sacral ligaments attached to the uterus posteriorly at a point just above the vaginal junction. Until they yielded, this part of the uterus would be retained upward and backward, while the abnormally soft cervix would be pushed in the direction of the vaginal axis, and the utero-vesical ligament would be made taut only at its higher points of attachment to the uterus, and the fundus would be pulled downward on the bladder. The third cause involved a consideration of Hart's division of the floor of the pelvis into two segments. The fourth cause of flexure of the uterus when soft was loss, to a greater or less extent, of the vital musculo-connective-tissue pressure. The bladder, except when considerably distended, had little or no influence in changing the position of the uterus; when greatly distended, it carried the organ downward and tended somewhat to straighten out the anterior curvature. The rectum, unless habitually distended, did not affect the position of the uterus to any important extent. There might, of course, be other mechanical influences brought to bear. The point of greatest curvature in anteflexion was often difficult of determination; as a rule, it was just about the os internum: first, because the uterus at this point was smaller than at any other point; second, it was at this point that the cervix and the body, which were somewhat different in structure, united; third, it was here that large blood-vessels were found, which tended somewhat to weaken the walls; fourth, just at and above the os internum the uterus was free, while the cervix just below was fixed by a firm supporting ring, formed by the attachment of ligaments. When the vaginal portion of the cervix was abnormally soft or long, flexion might take place in that portion.

The time for making an examination to determine the exact degree of curvature which existed should be selected, and a period about midway between the commencement and the cessation of a menstrual period was usually preferable, as at this time the uterus was more likely to be in a quiet state, indicating the true amount of flexion.

After speaking of the variability of the generative organs, the degree of anteflexion and its frequency were referred to. It was to be found in all multiparous women in some degree, but the angle of flexion might vary between 165° and 135° and not indicate an abnormal condition.

Under the etiology, congenital influences which prevented perfect development of the organs of generation undoubtedly greatly predisposed to anteflexion of the uterus, and had much to do with premature atrophy and degeneration, which were so frequently associated with it. The evil influence of modern modes of life, the development of the intellectual at the expense of the physical system, the condition of the general health, anæmia, and other unhealthy states of the body, had their influence in the production of anteflexion of the uterus. Child-bearing was commonly enumerated as a cause, but the author preferred to modify the expression, and say, too frequent child-bearing, or abnormal labor, or the puerperal state, or labor in an unhealthy woman, might be causes of anteflexion. Other causes were mentioned.

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With regard to pathology, the writer said that for several years past he had given up the belief that anteflexion frequently directly caused dysmenorrhœa by mechanically closing the canal and thus obstructing the menstrual flow. Where there was obstructive dysmenorrhœa, except in rare instances, he believed it to be due, as a rule, to stenosis of the os uteri at some point, or clonic spasm at the os internum; that it was due to the hyperæsthetic condition at or near the os internum, combined with more or less stenosis. He divided anteflexions into two classes,—those which were congenital, and those which were acquired, including among the former those cases in which the deformity occurred before maturity had been reached, and in which the cause was imperfect development. The peculiarities of these two classes of cases were then considered.

DISCUSSION.

Dr. T. A. EMMET was requested by the President to open the discussion, and said that the subject was so broad a one that it was impossible in so short a space of time to discuss all the points involved. He thought, however, that the question could be simplified very much by recognizing, in accordance with his own experience, that in anteversions of the uterus, as in most other versions, the trouble was due entirely to an inflammatory action, or obstruction in the circulation outside of the uterus, usually to a cold. When dysmenorrhœa accompanied that condition, it was not a mechanical effect, but was due to faulty nutrition, obstruction of the circulation, and effects upon the nervous system and general health. He thought it was important to recognize this cause of flexure, for the simple reason that we have no greater amount of malpractice than in the treatment of this condition by dilating the cervix, making applications within the uterine canal, etc., treating the effect as if it were the cause. He did not know that he had ever seen a case of anteflexion of the uterus give the patient any trouble but what there existed inflammation within the pelvis somewhere; and that explained why we almost invariably had trouble in surgical procedures for its relief. This fact should be borne in mind also in attempting to correct what we considered malposition. There was often malpractice in attempting to replace the organ, as it was imagined should be done, when it was not known what should be its proper place; there was danger of setting up inflammation anew. This was equally true in the treatment of other uterine versions, and he believed that this fact explained why there was such a wide difference of opinion with regard to the use of pessaries. Whenever anteversion existed,—and he limited his remarks to this form of displacement, as it alone had been discussed in the paper,—we had first to reduce inflammation to a point where it was safe to take steps to restore the uterus to its normal position. Whatever mechanical appliance was used, it simply gave the patient relief by raising the uterus to a certain point in the pelvis where the circulation could be restored. There were cases even where the anteversion might be made greater by raising the organ higher within the pelvic cavity, and yet relief be afforded thereby, simply because strain was taken off the ligament which had been shortened, and the circulation restored.

Dr. W. T. LUSK said that he had been invited to take part in the discussion, but that nearly all the remarks which he had expected to make had been anticipated by the author of the paper, and he would not further consume the time of the Academy.

Dr. W. M. CHAMBERLAIN had been extremely interested in the paper, and he believed that it involved a range of inquiry which we would all do well to prosecute. He would refer to a single illustration of the propagation of the force of the diaphragm, the abdominal muscles, etc., referred to by Dr. Wylie. Whoever had had occasion to observe the movement of the abdominal contents in a patient etherized and seized with a fit of vomiting would recognize the fact that the maximum of downward pressure by wave-motion was not exerted in Douglas's cul-de-sac, but rather in the interspace anterior to the uterus and upon the wall of the bladder. The extrusion of the vaginal wall, as he had seen it in such cases, had always been much more in the form of a cystocele than in the form of a proctocele; that is, the anterior wall descended much more than the posterior. He believed that the question of uterine dynamics should be considered with reference to education and habit as well as to the cure of displacements. Manifestly, any great departure from the order of nature which fashion dictated was mischievous. He would name, for example, the effects of posture, such as was assumed more two or three years ago than at the present time, called the Boston dip, which consisted in relaxing the walls of the abdomen and bending the body forward. If one would imitate the posture, and observe the effect upon the viscera, he would see that it nullified the anatomical support of the organs, as Dr. Wylie had stated. The influence of high-heeled boots in diminishing and altering tension upon the anterior wall of the abdomen he believed to be a matter worthy of consideration. He was particularly pleased with the author's statement with regard to the term vital musculo-connective-tissue pressure. While Dr. Emmet had spoken of anteflexions, in which the trouble was dependent upon a greater or less amount of inflammatory process, he thought there were also cases in which anteflexion, and more especially cases in which anteversion, was a source of great discomfort to the patient, and which would never

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be cured by mechanical appliances, because they were dependent essentially upon an empty state of the connective tissue, and that in many of these women who were bedridden the version or flexion of the uterus continued simply because they were bedridden, and the only means of cure would be found in the use of measures for the restoration of the general tone of the entire system, particularly measures for bringing about healthy nutrition.

Dr. WYLIE, in closing the discussion, said, with regard to the point made by Dr. Chamberlain, that in a patient under the influence of ether the anterior wall of the vagina was that which descended. It should be remembered that in Sims's position the curve of the spine was mainly taken out, and the greater part of the force was directed downward more in the direct line of the vagina. He believed that when the healthy woman stood erect the pressure was exerted equally and the uterus tended to sink evenly.

REVIEWS AND BOOK NOTICES.

THE HOSPITAL TREATMENT OF DISEASES OF THE HEART AND LUNGS, with over Three Hundred and Fifty Formulæ and Prescriptions, as exemplified in the Hospitals of New York City, etc. By CHAS. H. GOODWIN, M.D. New York, C. H. Goodwin, M.D., 1883.

This book, with its numerous "formulæ and prescriptions," professes to exhibit to the admiring world without the practice of Bellevue, New York Charity, Roosevelt, Presbyterian, St. Francis, St. Luke's, German, and Mt. Sinai Hospitals. The reader having mastered the contents of this book can on his first visit elect to treat his patient after the manner of any one of the above hospitals: he should beware, however, of trying any two methods at once, or of intermingling his methods. The real value of a book of this kind, supposing it—as we presume this is—to be faithfully written and really to represent what it professes to, is doubtful. It tends far more than the ordinary text-book to prevent individual thought and action,—to make the practitioner relying upon it merely a feeble reflection of this eminent man to-day and that eminent man to-morrow, and leave him without individuality. We admit, however, that Dr. Goodwin's work seems to have been done with care, and all possible means taken to render it of value to those who are debarred by distance and want of time from imbibing medical knowledge directly from the great fountains which flow so freely in the American metropolis. E. W. W.

TRANSFUSION. By CHAS. E. JENNINGS. London, Ballière, Tindale & Cox.

This wee brochure gives some early history of transfusion, but is chiefly devoted to describing a very simple apparatus, and to calling attention to the fact that warm saline solutions are nearly as useful as blood, and much more easily obtained. The author remarks, and his arguments strongly indicate, that a mixture of blood and saline solution is the best —*i.e.*, safest and most efficient—fluid that can be employed. From the contents of this and various other English books, it would seem that hemorrhage in connection with pregnancy and labor is far more frequent and serious abroad than in this country,—a fact which is in accord with the statement made by Dr. Brown-Séquard before the International Medical Congress in London, that both men and animals bleed much more easily and freely in Europe than in America. He affirmed that wounds on the battle-field were far more frequently followed by immediate fatal hemorrhage among Europeans than among Americans, and that upon animals he had in America performed successfully operations which in England and France were impracticable because of the fatal bleeding which invariably followed the attempt.

DIAGNOSIS OF OVARIAN CYSTS BY MEANS OF THE EXAMINATION OF THEIR CONTENTS. By HENRY JACQUES GARRIGUES, A.M., M.D. New York, Wm. Wood & Co., 1882.

Those whose ambition it may be to become distinguished in the field of ovariotomy, or whose minds are inclined to research in general and the settling of vexed questions, will do well to peruse Dr. Garrigues's Diagnosis of Ovarian Cysts, where an excellent summary of the state of the case up to the present time can be found, together with much new work undertaken by the author for the purpose, if possible, of settling the matter,—since the ovarian cell has so far fallen short of certainty as a diagnostic sign by merely a hair's breadth. The author, coming to the subject with a mind unprejudiced, studied the fluid as though "there never had been written anything upon the subject." The work is well illustrated, and the so-called "Drysdale's corpuscles" are figured and described. The author's conclusion we give in his own words: "There is no pathognomonic morphological element in ovarian fluid," yet examination of ovarian fluid is "a very valuable help." While acknowledging the value of Drysdale's corpuscles as somewhat greater than Bennett's, the author considers them as "by no means pathognomonic, not even of the presence of any kind of cyst, and still less of an ovarian cyst," and has found them in cysts of the broad ligament and abdominal wall, cancer of the peritoneum, renal cyst, congestive abscess extending from the spine to the femur, and in a vaginal cyst. As other experts give a similar testimony, the question may be regarded as left by Dr. Garrigues about as found by him when he commenced his observations.

E. W. W.

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GLEANINGS FROM EXCHANGES.

NEW OPERATION FOR ANCHYLOSIS OF THE JAW.—Dr. Mears presented the following case at the last meeting of the Academy of Surgery. The case was that of a young lady, 20 years of age, who had been accidentally shot when only two years old, by a playfellow. The charge consisted of small bird-shot, a few of which were still present and could be felt underneath the skin at the side of the neck. The gun was within a few feet of her face when discharged, the mass of the contents passing directly through the left side of the face, the direction being from before backward and outward. The greater part of the left cheek was torn away, including the zygoma, the malar bone, and part of the superior maxilla. Profuse bleeding followed, and a physician who was called in declined doing anything for the little patient, as, he said, she was sure to die. Her parents, being intelligent people, cleaned the wound and applied pressure, with the result not only of stopping the bleeding, but also of healing the wound, after a number of pieces of bone had been discharged. The result, however, as regards the functions of the jaw was not very good: anchylosis followed, and the jaws were bound together by a firm band of fibrous structure. For eighteen years she had been unable to eat food which required mastication; the teeth were prevented from developing, except a few, which grew to one side. The front teeth were rudimentary, and she stated that she had worn them away trying to push food into her mouth. Her voice was good, and she had just finished a collegiate course to fit her for teaching. She sought relief from the anchylosis in the hope that the defective denture might be remedied—in appearance, at least—by a double set of artificial teeth.

Dr. Mears found that the jaws were united on the left side with a firm band, fibrous or osseous, and that only a slight lateral movement existed at the articulation. There was also defective development of the bones of the left side of the face. The cicatrix on the cheek had contracted so as to draw away the lower lid and produce extensive ectropion, and the cornea had become opaque, either from the original injury or from exposure, so that the function of this eye was destroyed. The operation was completed at one sitting. A plastic operation was performed to relieve the ectropion, and in order to prevent unnecessary disfigurement, instead of making the usual line of incision to resect the jaw-bone, the knife was then carried through the cicatrix directly outward towards the lobe of the ear; the ascending ramus of the jaw-bone was then divided with the saw just below the coronoid process, and the portion of the bone above this was removed from its socket. A chain-saw was then introduced into the mouth, and the vicious band of union was divided, giving at once considerable motion to the jaw. A number of defective teeth-roots and stumps were removed, twenty-two in all; six teeth in front and on the right side were found to be good, and were allowed to remain. Six weeks after the operation the wound had healed, except a small superficial spot. The ectropion had been corrected; she was able to cover the eye completely with the lids. The jaw could be opened over an inch, and admitted lateral motion for chewing. She is now being fitted with artificial teeth; her appearance has been immensely improved. Before the operation she was obliged to wear constantly a black patch over her eye, which is no longer necessary; a veil is worn when she is out on the street, which sufficiently hides the cicatrix.

PICRIC ACID AS A TEST FOR ALBUMEN AND FOR SUGAR IN THE URINE.—Dr. George Johnson, in a communication to the *Medical Times and Gazette* (March 24), calls attention to the advantages of picric acid in clinical urinary analysis. An aqueous solution (of about one to fifty) is most convenient for home use: the dry powder or crystals may be carried in the pocket or urinary test case. The solution being added (superimposed) to an equal bulk of urine, will immediately coagulate the albumen, if present. If highly alkaline, the urine should be acidulated with acetic or muriatic acid before adding the test; but this will rarely be found necessary. The specific gravity of the saturated solution (1–50) is 1003; it therefore floats on the urine. It is a very delicate test for albumen, and has some very obvious advantages over nitric acid.

The following directions are given to apply the qualitative test for sugar:

"Take a fluidrachm of a solution of grape-sugar, in the proportion of a grain to the fluidounce, mix it with half a drachm of liquor potassæ (P. B.) and ten minims of a saturated solution of picric acid, and make up the mixture to four drachms with distilled water. The mixture is conveniently made in a boiling-tube ten inches long and three-fourths of an inch in diameter, which may be marked below at the height of two and four drachms. With a long boiling-tube there is little risk of the liquid boiling over, and the steam, condensing in the upper cool part of the tube, flows back as liquid, so that there is little loss by evaporation. The liquid is now raised to the boiling-point, and the boiling is continued for sixty seconds by the watch, so as to insure the complete reaction between the sugar and the picric acid. During the process of boiling, the pale-yellow color of the liquid is changed to a beautiful claret red."

The use of a series of standard colors for comparison will enable us to use this also as a quantitative test. The only objection to this is that it is too delicate, as it is slightly

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colored by the reducing substances of normal urine.

ABDOMINAL SECTION FOR CHRONIC PERITONITIS AFTER PARTURITION.—A woman, 26 years of age, presented herself at a lying-in hospital eighteen days after confinement, with purulent discharge from the vagina, having been discharged therefrom only two days before, when she was convalescent and in good condition. On the twenty-fourth day she complained of pain in the abdomen, and two weeks later was sent to King's College Hospital, under the care of Dr. W. S. Playfair. She then had an effusion both in the peritoneal and the left pleural cavities; right-sided pleurisy and pericarditis also soon developed, but these were relieved in a few days by the usual treatment. On the forty-second day the abdomen was swollen so much as to give rise to dyspnœa and distress; it was then aspirated, and seventy-two ounces of purulent fluid obtained; a fortnight later this was repeated, on both occasions giving temporary relief, as it did again two weeks later; altogether, two hundred and twenty fluidounces were thus evacuated. A fortnight afterwards, as there was a fresh accumulation, Dr. Playfair opened the abdomen with Listerian precautions, and introduced a drainage-tube. After this the patient made rapid progress to recovery. The drainage-tube was removed five weeks later, and the wound healed within eleven days afterwards. The internal remedies used were quinine, iron, and stimulants.—*British Medical Journal.*

FORCIBLE REMOVAL OF UTERUS, AFTER LABOR, BY A MIDWIFE.—A case is reported in the *British Medical Journal*, by Dr. Cane, in which the uterus and some of its appendages were torn away by a midwife. Mrs. B., 29 years of age, in delicate health, had her first child five years previously, subsequently two miscarriages, due to acquired syphilis. Attended by a midwife, death occurred shortly after delivery. It was found upon examining the placenta, which had been removed by the midwife, that there was attached to it a mass which proved to be the inverted uterus, an inch of the upper part of the vagina, both Fallopian tubes, the right ovary, and half of the left one. The uterus appeared to be healthy and the ovaries normal.

MISCELLANY.

DR. JOHN T. SHARPLESS died on the 22d ult., of pleuro-pneumonia, at his residence in this city, aged eighty-two years. After practising medicine with much success for thirty years, he retired from practice in 1853, and travelled with his sister for over twelve years through Europe and the Holy Land. He was a native of Maryland, graduated at the University of Pennsylvania in 1823, and in his practice devoted much attention to obstetrics and diseases of women. He was elected a member of the Board of Health in 1832, and during the prevalence of cholera in this city in that year he was very active in the duties of his office.

AT A FACULTY MEETING, held April 23, Dr. Roberts Bartholow was elected Dean of Jefferson College, to succeed Dr. Wallace, who was obliged to retire on account of ill health.

PATENT MEDICINES IN ITALY.—A law has just come into force in Italy which prohibits the sale of patent medicines throughout the kingdom unless the precise composition of the medicine is stated. This important decree has been promulgated by the Minister of the Interior, the customs, and the sanitary authorities.—*Medical Times and Gazette.*

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY FROM APRIL 7 TO APRIL 28, 1883.

ALEXANDER, CHARLES T., MAJOR AND SURGEON.—To be relieved from duty at the U. S. Military Academy, West Point, New York, August 28, 1883. Paragraph 6, S. O. 82, A. G. O., April 10, 1883.

WOLVERTON, WM, D., MAJOR AND SURGEON.—Granted leave of absence for four months on surgeon's certificate of disability. Paragraph 7, S. O. 85, A. G. O., April 13, 1883.

BARTHOLF, JOHN H., CAPTAIN AND ASSISTANT-SURGEON.—The extension of leave of absence for twenty-three days by S. O. 37, c. s., Department of the Columbia, further extended one month. Paragraph 1, S. O. 31, Military Division of the Pacific, April 3, 1883.

GIBSON, R. J., CAPTAIN AND ASSISTANT-SURGEON.—Relieved from duty at cantonment on the Uncompahgre, Colorado, and assigned to duty at Fort Hays, Kansas. Paragraph 1, S. O. 73, Department of the Missouri, April 7, 1883.

SHUFELDT, ROBERT W., CAPTAIN AND ASSISTANT-SURGEON.—To report in person to the President of the Army Medical Examining Board in session in New York City, for examination for promotion, on completion of which will return to proper station. Paragraph 10, S. O. 87, A. G. O., April 16, 1883.

CLEARY, PETER J. A., MAJOR AND SURGEON.—So much of Paragraph 10, S. O. 273, November 23, 1882, from this office, as directs him (then captain and assistant-surgeon) to report in person to the commanding general, Department of Dakota, is revoked, and, upon the expiration of his present sick leave of absence, to report in person for assignment to duty in the Department of the Missouri. S. O. 95, A. G. O., April 25, 1883.

HOPKINS, WM. E., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Now on leave of absence in New York City, to be relieved from duty in the Department of the East, and assigned to duty in the Department of Arizona. Paragraph 7, S. O. 95, A. G. O., April 25, 1883.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY FOR THE WEEK ENDING APRIL 28, 1883.

Surgeon J. B. PARKER ordered to the Torpedo Station, Newport, Rhode Island, *vice* Surgeon Wm. J. Simon, detached and waiting orders.

P. A. Surgeon M. H. SIMON detached from the Naval Hospital, Chelsea, Massachusetts, and ordered to the Naval Hospital, Yokohama, Japan, *vice* P. A. Surgeon C. Biddle, detached and ordered to the "Richmond."

P. A. Surgeon A. A. AUSTIN detached from the "Richmond" and ordered home.

Assistant-Surgeon J. H. BRYAN ordered to report May 1, for examination for promotion.

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PHILADELPHIA, MAY 19, 1883.

ORIGINAL LECTURES.

CLINICAL LECTURE
ON THE AFTER-TREATMENT OF PUERPERAL WOMEN.

Delivered at the Philadelphia Hospital

BY JOHN M. KEATING, M.D.,
Visiting Obstetrician to the Hospital.
Reported by W. A. EDWARDS, M.D.

GENTLEMEN,—Last week a woman entered the hospital, a few days after her confinement, in an apparently healthy condition. In forty-eight hours, however, local cellulitis had developed, with excessive pain on pressure, tympany, and a rapid rise of temperature. In other words, puerperal fever had set in, supposed to be due to the absorption of infectious material from the uterine surface, the patient having suffered an acute laceration of the cervix in the confinement. This rapid rise of temperature, the attack setting in so soon after labor, and, withal, the onset being so sudden, with obstinate vomiting, pain, tympanitic distention of intestines, interference with respiration, and the rapid sequence of symptoms which all foreshadowed a fatal result, made her condition indeed difficult to treat. It is here, in a case like the present, that I would most strongly advocate antisepsis and even intrauterine injections.

Dr. T. Gaillard Thomas presents an article in the *New York Medical Journal* for March 31, 1883, recommending these intrauterine injections in puerperal septicæmia. His cases are certainly extraordinary, and if they did not come from such authority I should be inclined to doubt the accuracy of the observation. One case was delivered in a perfectly normal manner, without difficulty or assistance. The temperature at the end of the fourth day had risen to 106.5°, and the patient presented all the appearance of puerperal poisoning. There was extensive bilateral laceration of the cervix. The uterus was then washed out with carbolized water every four hours, and the temperature at once fell to 101°; ten grains of quinine were given every eight hours, enough being administered to negative the idea of the high temperature being due to malaria. As soon as the temperature regained 105°, the washings were again ordered and the temperature was reduced in like manner.

Dr. Thomas also remarks that the time has arrived when we should treat puerperal septicæmia upon just as simple a plan as septicæmia of any other kind, by washing the surface where the disease originates with some antiseptic fluid. I desire to lay particular stress upon the temperature-record in cases of this nature; it is the guide-post to prognosis. The fatality of an epidemic or of an individual case is in proportion to the excessive temperature. It is a fact that prolonged high temperature will undoubtedly kill: this is seen in no other disease more decidedly than in the one under consideration.

During my term in this house, some ten years ago, our obstetrical wards were visited by a severe epidemic of septicæmia, introduced by a scarlet-fever patient. I preserved the record of forty cases of high temperature, which all presented much the same symptoms, developing tenderness in the abdomen in a short time after delivery, and in twelve hours the tympanitic distention of the bowels appeared. This abdominal distention is very characteristic, the women looking not unlike the cases of abdominal dropsical effusion which you so frequently see tapped in this clinic-room.

The evening temperature generally was 104°–105°, commonly followed by a chill, with marked signs of impaired circulation, difficult breathing, dyspnœa, local pain, more particularly noticed on pressure; and death usually occurred gradually, in about forty-eight hours, from interference with the circulation: the consciousness was preserved until almost the last moment. In most of these cases you will be able to trace this appalling condition of affairs to a local sore, lacerated cervix, and the introduction of septic material. Of course, in this house the conditions are more favorable for its development; the buildings are old, saturated with germs, and the obstetrical wards but little removed from large surgical rooms which are simply reeking with bacteria, micro-organisms, etc., which are but too ready to be carried across the nominal boundary-line. You will thus readily see that the hospital accoucheur is liable to meet more of these cases than in private practice. In fact, it is rare, in an ordinary normal labor in private practice,

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with no laceration or tearing, and when the forceps have not been used, to meet with excessively high temperature after delivery. From the foregoing remarks you will readily appreciate that the practical point of this lecture hinges upon the *treatment.*

First and foremost, I believe that many of the cases that we hear of septic trouble are due to meddlesome widwifery; for I venture to say that very many of the forceps cases are meddlesome midwifery. I advance this statement from actual observation. I am also convinced that forceps are too much used, and that they are frequently had recourse to not so much for the patient's weal as for the doctor's convenience.

In primiparæ, owing to various causes, too rapid labor may occur, the head passing the os before it is fully or widely dilated, and in consequence a laceration is produced, which directly favors the entrance of septic matter and its attendant train of evils.

Let me impress upon you the fact that you hold the lives of your puerperal patients literally in your hands, and that the practitioner cannot be too careful regarding cleanliness, especially as a busy man may be tempted to go at once from a scarlatinous patient, for example, to a labor case, when he may in all probability encounter an adherent placenta, leading him to introduce his hand, teeming with disease-germs, into the womb, and laying the patient open to grave danger of blood-poisoning.

Listerism shows marked results in reducing the prevalence or liability of septicæmia, though in my opinion the nail-brush, soap, and water are quite as valuable as carbolic acid, if used frequently enough. I must confess that puerperal fever is too often simply another and high-sounding name for carelessness. I do not advocate the delivery of women under the spray, nor am I satisfied as to the efficacy of carbolic acid unless carried down and laid directly on the septic centre.

Causes.—Septic material and a denuded surface for its entrance, as an abrasion of the mucous membrane, represent the slow-match and the train. In primiparæ this mucous tissue will stretch but little; longitudinal vaginal tears or rents are therefore frequently seen, and in many cases laceration of the cervix occurs. We then have the most favorable condition offered for the production of septicæmia and hyperpyrexia: as the cervix is high up, it requires more attention in order to keep clean, and the anatomy of the part is particularly favorable to the absorption of any matter in contact with it.

For the prevention of this undesirable condition I will mention three means:

First, prevent the access of septic matters to denuded tissues by cleanliness.

Second, make proper application of antiseptics to local abrasions.

Third, administer drugs which act directly on the uterine tissue, preventing the absorption of septic material by causing contraction.

After labor you should find the womb firm, hard, and globular; after a time it will relax, become larger, the cavity opens, and the sinuses again become patulous. It is now that the septic material gains entrance and starts on its death-dealing path. Here we find the indication for drugs.

Fordyce Barker some ten years ago insisted upon keeping the womb firmly contracted, and showed very conclusively the value of ergot, nux vomica, quinia, and iron,—in fact, of all drugs which contract tissue and act on unstriped muscle-fibre.

You will find great diversity of opinion in regard to the action of these drugs; for example, some claiming for quinine a powerful oxytocic action, others stoutly denying it, and advancing as an argument the fact that Southern women while pregnant take large quantities of the drug, made necessary by their malarial climate, without any bad effects.

A paper published in France in 1872 or 1873 probably gives us the true explanation of the action of these two substances. By experiments on animals it was found that ergot did act upon the uterus, provided that it was determined to that organ by some irritation, and if this irritation did not exist it would not act. So with quinine. The conditions are the same in the human female as in the animal with the artificially-irritated womb. We thus find that ergot and quinine will be determined to the organ, in the case of the former, at all events, producing decided contraction. High temperature is a danger in itself, as it produces acute fatty degeneration of the cardiac and uterine muscular fibre and of

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that of the intestinal canal; in fact, all the essential muscles succumb to this pathological action; as a result we have meteorism, attended by its disastrous consequences that I have already referred to. *The womb in this condition is unable to contract.* The knowledge of this fact is, I take it, the touchstone in guiding the case to a successful termination, and this point escapes many in their after-treatment of these cases. Some authorities say that this degeneration is due to fever-poison coursing through the circulation, as seen in the typhoid-fever heart; but, according to my interpretation, hyperpyrexia is the root of the trouble.

Death will rapidly occur, occasionally from excessive meteorism, but generally from extreme prostration; and, as this latter condition is due to a burning up of the tissues, the important indication is to depress rapidly the temperature, prevent absorption from abraded surfaces, secure proper contraction of the womb, and relieve local symptoms. First and foremost, we should aim to secure an abundant supply of pure fresh air, make the patient as comfortable as possible under the circumstances, and administer full doses of quinine as an antipyretic and for its beneficial tonic action on the nervous system, as we know the uterus is so dependent on nerve-influences, and, furthermore, as the contractions are entirely involuntary. You may also use cold applications, spraying, etc., or the cold coil, which is so popular with English accoucheurs.

I usually, especially in this house, make it my routine practice to administer quinine and ergot immediately after labor, believing, as I do, that they exert a specific action on the womb.

I also deem it expedient to exhibit small doses of light cathartics, more especially when we are treating high temperature, a dry coated tongue, etc. Calomel is usually selected, in doses of $\frac{1}{16}$–$\frac{1}{12}$–$\frac{1}{8}$ gr., rubbed up with sugar of milk, and taken every half-hour until a decided action on the bowels is secured, when the thermometer will register a marked fall in the temperature and your patient will feel much more comfortable. I always administer this calomel treatment, even after we have sewed up the perineum, for example. I do not at all advocate putting the bowels "in a splint," as our patients are decidedly more comfortable by having a daily evacuation, and, furthermore, there is less chance of tearing out the stitches. It is my practice to require the bowels of a parturient female to be opened before labor; but this, of course, is difficult to regulate in private practice.

As I have already told you, an important indication is to give drugs which will promote uterine contraction. The following I find is the most acceptable way to administer them:

℞ Ext. ergotæ fl., f℥iii;
Tinct. nucis vom., f℥ss;
Tinct. ferri chloridi, f℥ii;
Acid. muriat. dil., f℥i;
Syr. limonis,
Aquæ, āā q. s. ad f℥vi.
M. S.

This is usually an unpleasant mixture; but if you direct that the acid and iron be first added together, and then the nux vomica, you will prevent the formation of the tannate of iron, and consequently the inky taste.

For the same motive,—namely, to promote uterine contraction,—I am a firm advocate of the binder, especially in a loose, flaccid abdomen following great stretching, and also of the use of turpentine externally. The irritation of constant pressure will secure contraction and prevent the gradual enlargement of the womb.

The Use of Vaginal Injections.—This is the most important part of my lecture today. Dr. Thomas found, as I have already mentioned, that injections of carbolized water into the uterine cavity would reduce the general bodily temperature three to four degrees. You must use a Chamberlain tube which is of large calibre and will not allow the fluid to be introduced directly into a uterine sinus, the consequence of which would, as you know, be disastrous to your patient. If, however, the laceration is farther down in the sexual canal, you must be careful that your nurse does not simply wash the septic matter up into the womb and imprison it there: hence direct her to introduce the syringe high up, so that the water in finding its way to the external parts shall carry all septic material with it.

Personally, I do not ordinarily use syringes in private practice, and I do not meet with any higher temperature than those who use them in the old-fashioned way. I depend on securing tonic contraction of the womb by firm external pressure and reflex irritation, and simply

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order the nurse to wash the patient thoroughly with an antiseptic solution. For this purpose I use an old-fashioned remedy,—*i.e.*, alcohol in which is dissolved as much castile soap as is possible: this is soft, agreeable, and thorough.

In France they use solutions of corrosive sublimate as a wash, also intra-uterine suppositories of iodoform. This has reduced temperature as effectually as Thomas's carbolized water. There are also various antiseptic washes, but I will not occupy your time with them: the principle upon which they all are used is, as you know, their toxic action upon the lower forms of life.

If you reflect for an instant, you will see that the walls of the parturient canal after labor are once more approximated, and air does not enter. There is little chance for the accumulation of discharges, if you direct your patient to move about. I do not at all believe in allowing our puerperal patients to lie flat on their backs: you must order that they move about in the bed, turn from side to side, and thus relieve the canal of clots and discharges. *Position*, thus, to some extent, takes the place of *injections*. Hence I would impress upon you not to use the injection mechanically, and not to order it because it is fashionable; see to it that the nurse does not do more harm than good. Watch the heart and pulse, that their strength may be kept up and the temperature reduced. You must be prepared to associate digitalis with the medicinal treatment as soon as any tendency to heart-failure is manifest.

In some text-books, but more particularly in journals, aconite and veratrum viride are recommended in cases of puerperal fever. I warn you about these cardiac depressants. Do not let these journal articles cloud your reason: it is only in the early stages of the disease, and more especially in puerperal peritonitis, that you are at all justified in prescribing these drugs, and thus bleeding the patient into her own body, just as leeches would do externally; it is only in a typical sthenic case, in fact, in a case in which the older practitioners would bleed from the arm, that you are at all justified in exhibiting these depressants, and then my preference would be for aconite. Some, however, recommend veratum viride. As a rule, these cases are asthenic, when the general plan of treatment must be stimulant, both general and cardiac. The study of the *vomiting* is also of great importance. It is most obstinate and appalling in private practice; you will frequently meet with cases who cannot tolerate even a teaspoonful of pure cold water. This vomiting is of pneumogastric origin, due to the irritation of the remote fibres of the nerve found in the sexual organs.

Drugs must now be administered by the hypodermic syringe, or by rectal suppositories. Quinine may be given by the former method: there is little danger of producing abscesses, provided the solution be perfect and the needle deeply introduced into the muscular fibre.

Opium is indicated, and may be introduced by either the latter or the former method. The indication is, of course, the relief of pain or vomiting, quelling the nervous excitement, and as a tonic to the nervous system. If the pain is local and low down, a suppository is more efficacious; otherwise a hypodermic of morphia and atropia, small doses of calomel, dilute hydrocyanic acid, or complete rest of the organ may relieve the vomiting.

To secure the requisite amount of nourishment for your patient is, of course, difficult under these circumstances. Milk and lime-water frequently repeated and in small quantities is efficacious, also brandy and frozen beef-tea, or beef-juice, thus relieving thirst and supplying food at one and the same time. Koumiss will sometimes be retained when milk will not. Carbonic acid water added to the milk makes it light and palatable. Iced champagne will refresh and relieve the patient. You must use free feeding and stimulation.

I know of no more appalling death that you will witness than one of puerperal septicæmia, the patient gradually dying of exhaustion and from fatty degeneration of the heart-muscle, with consciousness fully retained until the last scene in the drama of life is over.

As a great many medical men will visit the Hygienic Exhibition of Berlin, we direct their attention to the Berlin Polyclinical Institution, in which clinical lectures on otology, rhinoscopy, dermatology, syphilology, laryngoscopy, neuro-pathology, electro-therapy, ophthalmology, etc., are delivered regularly.

Each course of lectures begins on the first of every month, and continues thirty days. The Berlin Polyclinical Institution is situated at Luisenstrasse 51.

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ORIGINAL COMMUNICATIONS.

AN ANALYTICAL STUDY OF TWO THOUSAND (2093) CONSECUTIVE CASES OF SKIN DISEASE.

BY H. W. STELWAGON, M.D.,

Physician to the Philadelphia Dispensary for Skin Diseases, Service for Diseases of the Skin, Northern Dispensary, and Department for Diseases of the Skin, Howard Hospital.

UNEMBELLISHED statements of facts are in the main apt to make dry and uninteresting reading. Especially is this true when the results of such are to a great degree but contributory, and therefore not immediately perceptible. A positive advantage, however, be it slight or great, always accrues from statistical work. Analyses must be made in order that synthetical deductions may follow. Indeed, the rapidity that has characterized the advance of dermatology in the past few decades is in great measure due to that spirit of accuracy of observation and annotation infused into this branch by the late Professor Hebra. Obscurity and confusion have given place to clearness and method, and the result is the dermatology of to-day.

In preparing this analysis, I have been actuated by a desire to put into a condensed and tangible form the dispensary work under my care for the last several years, and thus contribute an iota to the grand total from which valuable conclusions may be drawn. The cases here embraced extend over an observation of three years, and came under notice at the Philadelphia Dispensary for Skin Diseases, and the Northern Dispensary,—the former, as the name indicates, a special dispensary, treating patients from all sections, and the latter a general dispensary, whose patients all live within a certain area. An analysis of the cases of the one would differ materially from that of the other; chronic and rare cases eventually find their way to a special dispensary, whereas at a general dispensary diseases of an acute type largely predominate. Taking, then, this fact into consideration, together with the period of observation, it may, I think, be rightly inferred that in the present analysis is given an approximately correct idea of the relative frequency and character of these diseases as prevailing in Philadelphia.

Portions of these cases have appeared in clinical reports published from year to year.*

The present analysis considers these diseases in respect to relative frequency, the influence of age and of sex, and the effect of season.

The first table is a general summary of the diseases and cases observed, numbering, in regard to the latter, two thousand and ninety-three; named in the order of relative frequency, and showing also the sex of patients.

Table I.—Diseases arranged in the order of their relative frequency.

Disease.			Males.		Females.		Total.		Per cent.	
1. Eczema			337		323		660		31.53	
2. Syphiloderma			59		96		155		7.4	
3. Acne	milium		1	72	3	75	4	147	.19	7.02
	comedo		4		3		7		.33	
	simplex		48		52		100		4.78	
	rosacea		19		17		36		1.72	
4. Phthiriasis	capitis		11	43	37	48	48	91	2.29	4.34
	corporis		27		11		38		1.81	
	pubis		5		...		5		.24	
5. Urticaria			27		49		76		3.63	
6. Impetigo contagiosa			34		39		73		3.49	
7. Tinea	tricophytina	capitis	15	41	3	31	18	72	.86	3.44
		corporis	5		17		22		1.05	
		barbæ	5		...		5		.24	
	versicolor		9		10		19		.91	
	favosa		7		1		8		.38	
8. Pruritus			40		30		70		3.34	
9. Erythema	multiforme		18	25	28	41	46	66	2.19	3.15
	simplex		6		13		19		.91	
	nodosum		1		...		1		.048	
10. Dermatitis	venenata		21	51	5	12	26	63	1.24	3.01
	———		30		7		37		1.77	
11. Seborrhœa			30		30		60		2.86	
12. Furunculus			33		25		58		2.77	
13. Psoriasis			23		34		57		2.72	
14. Scabies			26		22		48		2.29	

* Medical and Surgical Reporter, April 23, 1881; Philadelphia Medical Times, March 25, 1882.

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Table I.—Diseases arranged in the order of their relative frequency.—(Continued.)

Disease.	Males.	Females.	Total.	Per cent.
15. Ulcus	18	23	41	1.96
16. Zoster	19	16	35	1.67
17. Impetigo	15	13	28	1.34
18. Miliaria	12	15	27	1.29
19. Herpes facialis	11	8	19	.91
Herpes progenitalis	1	...	1	.048
Herpes iris	2	1	3	.14
Herpes (total)	14	9	23	1.09
20. Purpura	8	11	19	.91
21. Abscessus	10	7	17	.81
22. Scrofuloderma	8	8	16	.76
23. Sycosis	15	...	15	.71
24. Varicella	4	10	14	.67
25. Verruca	7	6	13	.62
26. Lichen planus	1	2	3	.14
Lichen pilaris	5	3	8	.38
Lichen (total)	6	5	11	.52
27. Erysipelas	8	3	11	.52
28. Ecthyma	6	4	10	.48
29. Epithelioma	6	4	10	.48
30. Lupus erythematosus	1	3	4	.19
Lupus vulgaris	2	4	6	.28
Lupus (total)	3	7	10	.48
31. Paronychia	3	7	10	.48
32. Adenitis	8	1	9	.43
33. Vitiligo	3	5	8	.38
34. Alopecia areata	5	1	6	.28
Alopecia ——	1	1	2	.095
Alopecia (total)	6	2	8	.38
35. Chloasma	...	6	6	.28
36. Hyperidrosis	1	5	6	.28
37. Dysidrosis	3	2	5	.24
38. Pityriasis	4	...	4	.19
39. Variola	3	...	3	.14
40. Rötheln	2	1	3	.14
41. Anthrax	2	...	2	.095
42. Carcinoma	...	2	2	.095
43. Folliculitis capitis	2	...	2	.095
44. Morbilli	1	1	2	.095
45. Onychia	1	1	2	.095
46. Onychatrophia	...	2	2	.095
47. Onychogryphosis	...	2	2	.095
48. Steatoma	1	1	2	.095
49. Telangiectasis	1	1	2	.095
50. Anhydrosis	1	...	1	.048
51. Bromidrosis	1	...	1	.048
52. Callositas	1	...	1	.048
53. Clavus	...	1	1	.048
54. Eruptio simulata	...	1	1	.048
55. Hydroa	1	...	1	.048
56. Ichthyosis	1	...	1	.048
57. Lymphangioma	...	1	1	.048
58. Morphœa	...	1	1	.048
59. Nævus	...	1	1	.048
60. Pemphigus	1	...	1	.048
61. Xanthoma	...	1	1	.048
Diagnosis doubtful	2	3	5	.24
	1049	1044	2093	

The list comprises sixty-one distinct names or headings. A few of these are, for the sake of convenience, made to include several allied affections, so that in the aggregate nearly seventy diseased conditions are represented. A small number of these diseases occur proportionately oftener in private practice, but these exceptions are comparatively few; on the other hand, a certain number are observed to be more frequent in dispensary practice. Most prominent among the diseases thus varying may be mentioned acne, psoriasis, and the rarer diseases, epithelioma, lupus, etc., as being more frequent among private cases, and the animal parasitic affections and syphilodermata among cases observed in public practice.

It will be remarked that in regard to sex the cases were about evenly divided,—one thousand and forty-nine males to one thousand and forty-four females. In this respect diseases varied, as will be seen by referring to the table, and as will be shown in particular diseases in subsequent tables.

Under the first five names are comprised one thousand one hundred and twenty-nine cases, or fifty-four per cent.; under the first ten, one thousand four hundred and seventy-three, or seventy per cent.; under the first twenty, one thousand eight hundred and sixty-nine, or ninety per cent.

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In the next table, which, for obvious reasons, is given before taking up the consideration of particular diseases, are shown diseases in their relation to seasons. The principal and more common affections are specially tabulated, the remaining diseases being grouped under the head of miscellaneous.

Table II.—The more common diseases in their relation to seasons.

Disease.	Spring.	Summer.	Autumn.	Winter.	Total.
Acne	46	35	29	37	147
Eczema	214	142	159	145	660
Erythema multiforme	21	6	9	10	46
Furunculus	8	25	14	11	58
Phthiriasis	22	18	25	26	91
Pruritus	13	17	22	18	70
Psoriasis	22	7	15	13	57
Seborrhœa	24	11	18	7	60
Scabies	18	6	11	13	48
Syphiloderma	44	41	32	38	155
Tinea	30	18	9	15	72
Urticaria	23	21	18	14	76
Zoster	7	7	11	10	35
Miscellaneous	133	135	140	110	518
	625	489	512	467	2093

According to the general facts divulged by this table, skin diseases are much commonest in the spring season,—March, April and May, according to a further analysis I have made, representing individually more cases than any one of the remaining nine months, March standing first, April and May following in the order named, and but slightly differing. These facts corroborate what is already known. The explanation of this preponderance in the spring may be found in the fact that at this season of the year, especially during March and April, the weather is apt to be damp and windy, with sudden changes of temperature. Besides, in general, I think it may be said that the skin, having been subjected to the prolonged cold of winter, is weakened, and therefore rendered more susceptible to disease.

We may now proceed to consider briefly some of the more prominent diseases individually.

ECZEMA.—It requires no analysis to prove the great frequency of eczema, and to assign its proper position. It stands so prominently first that a statement of the fact becomes unnecessary. Recurring to Table I., it will be seen that this affection was noted in six hundred and sixty cases,—31.5 per cent. This may be looked upon as fairly representing the frequency of this disease both in private and public practice. It varies from year to year, but in a cycle of three or four years the average will be the same. The affection is, as will be seen by referring to Table II., most frequent in spring, March and April leading, and least common in summer. In Table III. are shown the ages of patients affected, as well as the influence of sex at different periods of life.

Table III.—Eczema (660 *cases*) *in its relations to age and sex.*

Age.	Males.	Females.	Total.
Under 1 year	37	21	58
1 year to 2 years	22	16	38
2 years to 3 years	9	19	28
3 " 4 "	10	15	25
4 " 5 "	3	12	15
	81	83	164
5 years to 10 years	27	13	40
10 " 20 "	28	31	59
20 " 30 "	35	54	89
30 " 40 "	37	47	84
40 " 50 "	50	43	93
50 " 60 "	37	33	70
60 years and above	42	19	61
	337	323	660

In the first year of life it is exceedingly common, and probably forms eighty per cent. of all cases of skin disease observed at this period. In the first five years one hundred and sixty-four cases are noted, being about one-fourth of the whole number recorded. The affection becomes less frequent until middle life, and then increases, exemplifying the fact that vulnerability of the skin is greatest during early and late life. Sex varied at different periods, but in the aggregate is remarkably even. All varieties of the disease were presented, but in the vast majority of cases the condition noted was that known under the name of eczema rubrum. The youngest patient in whom the disease was observed was eighteen days old, the oldest past eighty years. No part of the body was exempt; exposed parts, as the hands and face, were most frequently the seat of disease.

SYPHILIS.—This disease is of course considered here in relation to its cutaneous manifestations. Syphilis, in the secondary

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stage especially, naturally gravitates to a skin clinic. Table I. shows one hundred and fifty-five cases, or a proportion of 7.4 per cent. By far the greater number of the patients were females,—in this respect almost twice as many females as males. A majority of the patients came under notice during the spring and summer months.

The cases under five years were, as may be supposed, due to hereditary syphilis. Of the fifteen so tabulated, five were less than three months old, two between the ages of three months and six months, four between six months and a year, one between one and two years, and the remaining three between two years and three years.

Table IV.—Syphilis (155 *cases*) *in its relations to age and sex.*

Age.	Males.	Females.	Total.
Under 5 years	9	6	15
5 years to 10 years	...	...	...
10 " 15 "	...	...	...
15 " 20 "	4	8	12
20 " 30 "	17	34	51
30 " 40 "	14	25	39
40 " 50 "	13	18	31
50 " 60 "	2	5	7
	59	96	155

One-third of the cases presented were between the ages of twenty and thirty, gradually decreasing in frequency as age advances. Thus, after sixty no case was recorded.

The early or general eruptions were seen in sixty-seven of the cases; the late or local eruptions in eighty-eight. Of the general eruptions, the varieties presented were—*macular*, 13; *maculo-papular*, 15; *papular*, 28; *pustular*, 9; *tubercular*, 1; *bullous*, 1. Of the papular, fourteen were of the squamous form. The case of bullous syphiloderm occurred in a child with hereditary disease.

The later or local eruptions may be designated as follows: *papular*, including papulo-squamous, 14; *tubercular*—ulcerating, 20, non-ulcerating, 28—48; *pustular*, 4: *gummatous*, 4. The remaining eighteen were recorded as syphilitic ulcers, probably due either to broken-down tubercles or gummata, but whose distinguishing characters had disappeared. The tubercular eruptions were frequently seen in their circinate and serpiginous forms.

The regions affected in these local eruptions were—*face*, 27 cases; *forearm*, 10 cases; *leg*, 9 cases; *thigh*, 8 cases; *neck*, 6 cases; *breast*, 5 cases; *arm*, 3 cases; *scalp*, 2 cases; *back*, 2 cases; *palms*, 2 cases; *palms and soles*, 1 case. In the remaining thirteen cases two or more regions were the seat of eruption.

ACNE.—Next in order on the table stands acne, with a total of one hundred and forty-seven cases,—7 per cent. This is much below the proportion occurring in private practice, in which the percentage is as high as twenty to twenty-five. This is due to the fact that in the higher walks of life such eruptions excite more solicitude and the disfigurement produced causes application to be made for relief,—facts which, for known reasons, do not hold to any great degree among the working classes. Besides, the disease is looked upon as a natural condition of growing youth, and consequently but a small proportion of cases seek advice. This latter exercises a limiting influence among all grades of society. Sex was about equally divided.

Rosacea was noted in thirty-six instances, mostly in its mild form. But few cases were observed in which the disease was developed to any great degree, and in these few the hypertrophy was not excessive. This affection was seen in later life.

PHTHIRIASIS.—Phthiriasis appears fourth on the list, being accredited with ninety-one cases, or 4.34 per cent. The scalp was infested in forty-eight cases, of which thirty-seven were females. It is well known that the hair of the female, being long and peculiarly dressed, affords a favorite habitat for this pest. Of the thirty-eight cases of phthiriasis corporis, twenty-seven were males. The remaining five cases of phthiriasis were cases of phthiriasis pubis, and occurred in males.

The proportion of cases of phthiriasis seen in private practice is exceedingly small, as will be inferred from the nature of the trouble.

URTICARIA.—This affection comes next in order of frequency, with seventy-six cases, or 3.6 per cent. This is probably much less than the proportion in reality is, as numbers of cases of urticaria never come under the notice of a physician, and least of all of a specialist. This is particularly the fact with acute cases. On

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the other hand, chronic urticaria almost invariably reaches a special clinic. By referring to the accompanying table—Table V.—it will be seen that the disease occurred at all ages, although somewhat commoner in early life.

Table V.—Urticaria (76 *cases*) *in its relations to age and sex.*

Age.	Males.	Females.	Total.
Under 10 years	6	13	19
10 years to 20 years	5	13	18
20 " 30 "	4	7	11
30 " 40 "	2	4	6
40 " 50 "	4	6	10
50 " 60 "	5	2	7
60 years and above	1	4	5
	27	49	76

The affection was observed in almost twice as many females as males. This is to be expected from the nature of the disease, occurring, as a rule, in those in whom the nervous temperament is markedly developed. In several cases the disease had persisted almost uninterruptedly for months, wheals disappearing and reappearing, but scarcely ever absent, and in the greatest degree rebellious to treatment. *Urticaria papulosa* was seen only in children. One case of *urticaria bullosa* was noted. Two cases of *urticaria tuberosa* or *œdematosa* were recorded. In these two cases marked and sudden swellings, especially of the eyelids and the upper lip, occurred from time to time. Urticaria was observed most frequently in spring and summer.

IMPETIGO CONTAGIOSA.—This curious affection, as will be seen by glancing at Table I., was recorded in seventy-three instances, or 3.5 per cent. As often two or three cases were observed in individual families, the whole number represents the disease as occurring in about thirty households. All the cases, with the exception of three, were encountered at the service of the Northern Dispensary. The affection was confined almost exclusively to children, only a few adults exhibiting the disease, and in these but one or two abortive patches and contracted from a younger member of the family. In many of the cases the eruption was limited to patches on the face; but equally common was it to see both face and hands affected. In others there were scattered patches on the arms and legs. The cases presented at the service in groups, so to speak; that is, a series of cases would be recorded in a short space of time, and then several weeks would elapse before others were noted.

TINEA.—The vegetable parasitic diseases have been, for the sake of convenience, tabulated together. Under this head seventy-two cases are recorded.

Tinea tricophytina was observed in forty-five instances. The body was affected in twenty-two cases, or one-half; the scalp in eighteen cases, and the bearded region in five cases. It is worthy of note that of the twenty-two cases in which the body was the seat of disease, seventeen were females; and of the eighteen cases of tinea tricophytina capitis, fifteen were males.

Tinea vesicolor was recorded in nineteen cases, forming .91 per cent. of the whole number of cases.

Tinea favosa was noted in eight cases,—.38 per cent.

These vegetable parasitic diseases, as will be seen by recurring to Table II., were by far most common in spring, almost half the number having been recorded at this season, March and April leading.

PRURITUS.—Pruritus follows with a total of seventy cases,—3.34 per cent.

Table VI.—Pruritus (70 *cases*) *in its relations to age and sex.*

Age.	Males.	Females.	Total.
Under 30 years	2	...	2
30 years to 40 years	5	5	10
40 " 50 "	4	11	15
50 " 60 "	9	4	13
60 " 70 "	11	5	16
70 " 80 "	7	3	10
80 years and above	2	2	4
	40	30	70

Table VI. shows that the disease is uncommon before the fortieth year. The cases, with a few exceptions, occurring before this, exhibited the disease as affecting the genital region, or exemplified the variety known as pruritus hiemalis, a variety of the disease to which attention was first called some years ago by Dr. Duhring. A few of the later cases were also recorded under this heading. In regard to sex, the males were in excess.

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ERYTHEMA. — Of the sixty-six cases coming under this head, forty-six were cases of *erythema multiforme*, and one case of *erythema nodosum* was noted.

Erythema multiforme, as the accompanying table—Table VII.—shows, occurred at all ages, although much more common before the age of thirty.

Table VII.—Erythema multiforme (46 *cases*) *in its relations to age and sex.*

Age.	Males.	Females.	Total.
Under 10 years	9	11	20
10 years to 20 years	4	2	6
20 " 30 "	3	9	12
30 " 40 "	1	3	4
40 " 50 "	...	2	2
50 years and above	1	1	2
	18	28	46

The papular form of the eruption predominated. The larger number of cases occurred in females. Twenty-one of the cases were observed in the spring months, May leading. The eruption at times bore a close resemblance to urticaria, to which disease it is probably closely related.

PSORIASIS.—In all, fifty-seven cases—2.72 per cent.—came under observation.

The disease was seen in a comparatively mild form, only a few examples of a severe grade of the disease presenting. In three cases the disease was limited to the scalp.

Table VIII.—Psoriasis (57 *cases*) *in its relations to age and sex.*

Age.	Males.	Females.	Total.
Under 10 years	1	3	4
10 years to 20 years	2	11	13
20 " 30 "	9	7	16
30 " 40 "	6	8	14
40 " 50 "	4	3	7
50 years and above	1	2	3
	23	34	57

The disease was observed at almost all ages, but most commonly about the period of maturity. Four cases were in children under ten years of age. In one instance the eruption was seen in a child under four years.* The disease occurred more frequently in females than in males. The greatest number of cases came under notice in spring.

SCABIES.—Scabies was seen in forty-eight instances,—a percentage of 2.29. The greatest number of cases came under treatment during the spring months.

ZOSTER.—In all, thirty-five cases of this disease were recorded. Of these, thirty-two were seen at the Northern Dispensary. The affection was seen in all degrees of development. The most usual symptom was a burning sensation. In a few of the cases there was considerable prodromic neuralgia; in the vast majority, however, the subjective symptoms gave rise to but little complaint. All ages were noted, but the disease was commonest before the age of twenty, twenty-two of the thirty-five cases having occurred before this period.

Table IX.—Zoster (35 *cases*) *in its relations to age and sex.*

Age.	Males.	Females.	Total.
Under 5 years	1	2	3
5 years to 10 years	5	3	8
10 " 20 "	6	5	11
20 " 30 "	2	...	2
30 " 40 "	1	...	1
40 " 50 "	2	2	4
50 " 60 "	1	4	5
60 years and above	1	...	1
	19	16	35

The youngest patient in whom the disease was seen was aged three years. In this case the eruption was seated upon the buttock and thigh.

The varieties, based upon region affected, were as follows:

Z. facialis (frontalis)	3
Z. cervico-facialis	2
Z. cervico-brachialis	2
Z. thoracicalis	10
Z. abdominalis	7
Z. lumbalis	4
Z. lumbo-femoralis	3
Z. femoralis	4

Most cases were seen during autumn and winter, September and January leading.

To take up the remaining diseases, or even those that are of great interest, and consider them individually, would be beyond the scope and intent of this analysis.

* Psoriasis in a Child under Four Years of Age: Philadelphia Medical Times, April 23, 1881.

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As regards relative frequency, a fairly accurate idea may be obtained from Table I. For the purpose of considering the relation of sex and age the cases are not sufficiently numerous to render an analysis of these points of any value. Moreover, the rarer cases, if worthy of note at all, would require minute description, which would prolong this paper unnecessarily.

A few cases* rendered interesting on account of unusual features have been elsewhere reported.

IS OUR DOCTRINE OF FUNCTIONAL AND ORGANIC MURMURS OF THE HEART CORRECT OR NOT?

BY HUGO ENGEL, M.D.

TOWARDS the latter part of last year I was called to attend a young man, C. M., with a rather common but somewhat interesting history. He had, about three months before, been attacked for the first time in his life by scarlatina, being then 22 years old. The disease ran a mild but typical course; the throat-symptoms were well expressed, but the eruption was scant and followed by very moderate desquamation. Nearly four weeks after the beginning of the malady, œdema of the eyelids and of the lower extremities set in; three days later, general anasarca developed itself. This symptom apparently had been cured, but when the patient, some two months later, consulted me, he still complained of feeling languid, of want of appetite and strength, of a dull pain in the lumbar region, of occasional swelling of the ankles, especially towards evening, and of shortness of breath and palpitation of the heart on the slightest exertion. He looked pale and emaciated; his eyelids were slightly puffy. The urine contained a small amount of albumen and a few epithelial casts. But—and this was, regarding the final result, the most interesting sign—on examining the heart I plainly perceived a harsh systolic murmur, whose point of greatest intensity was over the mitral valve (at the base it could hardly be heard); the second pulmonary sound was decidedly louder, the *choc* stronger, and, on percussion, I found the area of dulness towards the right evidently increased, so that besides a chronic inflammatory kidney the diagnosis of mitral regurgitation with dilated hypertrophy of the heart appeared to be correct. I first regulated carefully the diet of the patient, placing him mainly on milk, buttermilk, eggs, stale bread, and lean beef; ordered steam baths to be taken daily, administered a mild diuretic in conjunction with digitalis, and caused every second day a profuse diaphoresis by the hypodermic injection of muriate of pilocarpia. After (perhaps seven weeks later), under this treatment, for a period of two weeks there was nowhere to be noted any indication of œdema, and after the urine had been free of albumen and of tube-casts for nearly the same length of time, I placed the patient on a stronger diet, and prescribed Basham's mixture; and when again, two weeks later, none of the symptoms and signs of the diffused kidney-disease had reappeared, I ordered first ten and later fifteen drops of the tincture of the chloride of iron, largely diluted with wine, to be taken three times daily. By some accident, or, I rather suppose, on account of the fact that the former heart-symptoms (dyspnœa, palpitation) had ceased to trouble the patient, I had not auscultated the main organ of circulation for some weeks, when one day, after the patient had taken the chloride of iron for perhaps ten days, on again examining the heart, to my astonishment I could detect no murmur, nor was I able to demonstrate any increased impulse or area of dulness, nor could I perceive any accentuation of the second pulmonary sound.

Before proceeding further, I must emphatically repel any supposition that this was possibly a case of so-called functional murmur due to anæmia. According to the traditional teachings, such surely was not the case. We are taught that a functional or blood murmur—usually met with in anæmic or in other persons, in whom the blood may be said to be watery—is a soft murmur, heard at the base only, that it is often connected with the *bruit des nons*, and that it improves under treatment and is not associated with any increase in the size of the heart.† Here there had been a harsh systolic murmur, clearly loudest at, confined even, limited almost entirely, to the mitral valve; it could hardly, if at all, be perceived at the base, and was associated

* A Case of Feigned Eruption,—Archives of Dermatology, July, 1882; An Interesting Case of Herpes Iris,—Medical News, October 14, 1882.

† Vide Da Costa, Medical Diagnosis, chapter on Diseases of the Heart, 1881.

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with hypertrophy of the organ. Besides, without vanity, I may say that I have had too much experience in such examinations not to have recognized an anæmic murmur. Certainly the murmur here also disappeared under treatment; but this is the interesting point of the case. It then occurred to me that occasionally before I had met with cases where in the beginning I had been convinced that there existed an organic valvular lesion, and where I had even given a prognosis based upon this assumption, but where later the murmur had disappeared again. Usually in such a case I had persuaded myself that my first diagnosis had not been correct,—that the murmur at its beginning had been a so-called functional one; but the determination to examine in future any similar case with the utmost care and precision became firm with me, and I am positive that in the case just reported I did not make a mistake in the diagnosis. Certainly in this case the murmur was a functional one also, but—and to this I attach its importance—a functional murmur of which we have been taught that it is always a sign of an organic valvular lesion, a murmur of which it has been said that it never can accompany a purely functional disturbance of a valve. Before going further into the subject, I may add that I purposely made no reference whatever to that functional murmur which accompanies over-action of the heart, as by simply permitting an individual so affected to rest for five or ten minutes in the recumbent position such a murmur will disappear, and can, therefore, be accounted for: it is very transient. Besides, this murmur always goes hand in hand with an over-acting heart: the patient usually is nervous, a stranger to the physician, and comes to him full of excitement. It is a murmur which is especially well known to the expert in life-insurance examinations, and can deceive none but the merest tyro.

While C. M.'s case guided my thoughts in the direction indicated, the next case was, to me at least, a definite proof that our doctrine of functional and organic murmurs badly needed amendment.

When in the course of an attack of acute articular rheumatism, no matter what the other accompanying symptoms may be,—whether they imitate affections of the brain, or of the stomach, or neither,* whether there is pain in the præcordia, dyspnœa, an anxious expression of the face, a feeling of pending evil,† and an abrupt alteration of the beat of the radial pulse, or not,—in a person whose heart *before* the seizure was *not* the seat of an organic murmur there suddenly develops itself, as it were under observation,‡ a harsh systolic murmur over the body of the heart, we have the complication of endocarditis added to the rheumatic disease;§ and when later the same murmur has its point of greatest intensity at, or is limited to, the apex of the heart (recognizing the possibility that, as is often the case, the inflammation may from the very beginning be confined to this locality), the inflammation has become localized in the mitral valve, and the murmur indicates insufficiency of the valve.‖ The most recent systematic writers add—and this may be said to be the doctrine of the day—that this diagnosis of localized valvular endocarditis, of regurgitation of the mitral, becomes certain only when, in conjunction with the murmur mentioned, the transverse diameter of the heart is increased and the second pulmonary sound accentuated.¶ I shall now report the next case bearing directly on this point.

F. R., driver of a furniture-wagon, æt. 42, was seized December 2, 1882, with acute articular rheumatism. The disease ran its usual course, was not severe, and seemed—at least the pains did—to be easily controlled by salicylic acid. The sounds of the heart were normal. On the eleventh day the patient felt very much weaker than the day before, and his breathing seemed to be somewhat more laborious. The expression of his face, while by no means anxious, had changed in a peculiar manner. On then listening to the heart, I plainly heard a harsh systolic murmur near the apex: it could be faintly perceived at the base, and the second pulmonary sound was louder. The next two days no change took place, except perhaps that the second pulmonary sound became still more accentuated; but on the third day there could be demonstrated a decided increase of dulness towards the right side of the heart. In consequence of previous experience, I did not mention these signs, hitherto considered so ominous, to any of the patient's friends, preferring to await

* Da Costa, Med. Diag., chap. vii., § on Endocarditis.

† Niemeyer, Handb. d. spec. Therap. und Pathol., 1879.
‡ Da Costa, *loc. cit.*
§ Guttmann, Grundr. d. spec. und allg. Pathol.
‖ Eichhorst, Path. d. Herzkr.
¶ Vide Seitz, Guttmann, Eichhorst, Gerhardt, *et al.*

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the further progress of the case, which continued in the manner described for twelve days longer. At that time all the rheumatic symptoms had disappeared, the patient began to feel comfortable and enjoyed a good appetite and rest, and at the same time it became clear to me, what I had suspected for two or three days before, that the murmur had begun to lose its harshness, the second pulmonary sound its loudness, and the area of dulness to have become less. To make the history short, on the thirty-ninth day from the commencement of the illness, and the twenty-eighth from the first appearance of the suspicious signs of the heart, the patient was perfectly well, and his heart normal in every respect so far as functions, symptoms, and signs were concerned.

As I could not expect that the medical profession, on this statement alone and on the strength of these two cases only, would reject the acknowledged teachings of the last twenty or more years, I looked up the literature on the subject, and, finding nothing of any importance, I postponed the publication of my cases. But recently I came across the very able article of Prof. Ed. Maragliano, the Director of the Clinical Institute in Genoa;* and, as here I found not only a confirmation of my opinion, but, based upon a long series of observations, a far stronger assertion regarding functional murmurs, I have prepared a short extract giving the results of Maragliano's careful investigations, which, should they be confirmed by further researches, are destined to produce a revolution in the diagnosis and prognosis of organic and functional diseases of the heart. And they are of the more importance as the prognosis of an organic valvular lesion is always a very grave one, where the slightest error in judgment may make an individual miserable for life, suffering from the mistaken idea that he is the subject of an incurable heart-disease.

The object of Maragliano's clinical observations was the study of the functional disturbances of the valvular apparatus in their relation to the mechanism of the intra- and extra-cardial circulation, and to the diagnosis of endocarditis. The following questions were to be answered: 1. Can a simple functional disturbance induce in an otherwise uninjured valvular apparatus those changes in the mechanism of the intra- and extra-cardial circulation which usually are caused by organic lesions of the valves and the ostia? 2. Do there exist physical signs by which the organic lesions may be recognized from the functional disturbances?

At present it is generally taught that the two kinds of disturbances of the valves of the heart, organic and functional, cause partly different symptoms and signs, and that the clinic possesses physical means by which the two varieties may be recognized and differentiated from each other. It is further contended that the organic as well as the functional maladies produce murmurs, but that the mechanical disturbances of the intra- and extra-cardial circulation accompanying the organic lesions do not happen in functional troubles.

With regard to the mitral valve,—and this is the valve which is always meant whenever this question is debated,—we find, therefore, the opinion in vogue that in case this valve is disturbed in its nutrition there are met with, besides the systolic murmur near the apex of the heart, an increase in size of the transverse diameter,—a sign of overfilling with blood of the right heart,—and an accentuation of the second pulmonary sound,—a sign of overfilling of the smaller or pulmonary circulation.

If one of these signs is wanting, or if both are absent, the murmur is said to be an anorganic one, due to a simply functional insufficiency.

The increase of the transverse diameter and the accentuation of the second pulmonary sound in conjunction with the systolic murmur at the apex of the heart are considered pathognomonic signs of an endocarditis specially limited to the mitral valve.†

This clinical dogma, the correctness of which is now disputed, was first taught by Oppolzer,‡ who has been followed by all later writers;§ and the same opinion is expressed again in the most recent works of Guttmann and Eichhorst.‖ Basing

* Zur Symptomologie der functionellen Störungen der Herzens, von Prof. Ed. Maragliano, Director der klinischen Instituts zu Genua. Centralbl. f. d. Med. Wissensch., Orig. Mittheil., No. 46, Nov. 18, 1882.

† For well-known reasons, in mitral regurgitation *both* ventricles hypertrophy.

‡ Oppolzer, Krankheiten der Herzens und der Gefässe, p. 79.

§ Da Costa, *loc. cit.*

‖ Eichhorst, Hdb. d. spec. Path. u. Ther., i. p. 115. Notwithstanding this pathologist admits that in anæmic and febrile cases a dilatation may also take place, he ascribes a pathognomonic value to these three signs—murmur, increase of second pulmonary sound, and hypertrophy of the right heart—*i.e.*, when they appear synchronously, at one and the same time. Guttmann, in his article on valvular lesions in

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his judgment upon numerous observations extending all through last year, Maragliano believes himself authorized absolutely to deny the correctness of the rule.

Maragliano considers it unnecessary to mention in detail all the cases which served him in his investigations as scientific material, and he reports, therefore, simply the results of his observations. It is possible that there may exist in simply functional disturbances due neither to valvular lesions nor to lesions of the ostia nor caused by degenerative processes in the myocardium,—as was proved by all the phenomena, the course, and the final issue of the disease,—besides the systolic murmur at the mitralis, an increase in the transverse diameter and an accentuation of the second pulmonary sound. This possibility, admitted some years ago by Gerhardt and E. Seitz, but only in cases of chlorosis,* and denied by most authors,† must now be acknowledged also with reference to the other anorganic murmurs of the mitralis, notwithstanding neither Gerhardt nor others admit it nor think it possible.‡ And, as at present some include in the functional murmurs of the mitral valve those also which are heard in cases of dilatation of the left heart with dilatation of the respective venous ostia, Maragliano considers it necessary to add that he does not include the latter in his clinical cases, as we have evidently to do here with an organic alteration of the ostium, and the valve, though perfectly uninjured itself, is not able to close the ostium perfectly.

From the facts contended for—viz., from the possibility of an increase in size of the right heart and of an accentuation of the second pulmonary sound—the following conclusions may be drawn directly.

The first refers to the pathogenesis of the functional murmurs. The fact that besides the latter there may exist overfilling of the right heart and of the small circulation proves that those are right who contend that these murmurs, no matter how produced, are dependent upon the purely functional inability of the healthy valve to close the ostium, whose diameter is normal also, in consequence of which inability the blood flows back, during systole, from the ventricle into the ostium. In case this functional disturbance of the valve continues a short time only, and if the tonicity of the myocardium is perfectly normal, no changes will take place in the mechanism of intracardial circulation, nor will the heart become altered in any way; but should a disturbance of such a kind go on for a longer period, and the tonicity of the myocardium become diminished,—which it necessarily must do when the demand upon it causes a greater muscular action,—then there will appear the physical changes above described.

The second consequence concerns the diagnosis of endocarditis valvularis vegetans (vegetating valvular endocarditis). And, in reality, after the investigations of Maragliano, in the course of an attack of acute articular rheumatism the diagnosis of endocarditis can no longer be made, as, according to his experience,§ the group of symptoms hitherto considered as characteristic of endocarditis may solely be the consequence of the oligæmic condition developing so rapidly in the rheumatic disease and causing so early those anorganic murmurs which to-day are recognized by all practical physicians as a very frequent phenomenon of the malady mentioned.

Not until the latter has run its course and the oligæmia has disappeared are we able, depending upon the persistence and permanence of the physical signs, to decide if the complication of endocarditis had in reality existed or not.‖ And this restriction holds good not alone in valvular endocarditis, but in all cases where the patient is affected by all the mechanical changes

the Real-Encyclopaedie of Eulenburg (vol. vi., 1881, p. 433), writes, "The three symptoms named—systolic murmur at the apex of the heart, hypertrophy and dilatation of the right ventricle, accentuation of the second sound of the pulmonary artery—are the cardinal points in the diagnosis of mitral insufficiency, they alone establishing the same."

* Gerhardt, Handbuch d. Perc. und Ausc., Italian edit., p. 167. Prof. De Renzi has also adopted this view (vide De Renzi, Semiotica fisica del Cuore, pp. 136-176), as also Niemeyer, Seitz (Lehrb. d. spec. Pathol. und Therap., 1879, ii. p. 844). This author quotes the studies of Stark, with whose opinion he coincides.

† Guttmann, *loc. cit.*, writes, "As the anorganic murmur in chlorosis is sometimes, for instance, the strongest at the apex of the heart, and the action of the organ is increased in such cases, one might suppose that a mitral insufficiency was present. Absence of hypertrophy of the right heart, and the fact of the second pulmonary sound not being accentuated, exclude the possibility of an error in diagnosis."

‡ Vide Gerhardt, *op. cit.*, p. 166.

§ Coinciding with my own in the case of F. R., and others.

‖ It is not improbable that, after all, it will be shown that the accompanying symptoms (anxious expression of the face, sudden alteration of circulation and respiration, more or less intense pain in the præcordial region, or those of apparent brain- or stomach-disease, as delirium, vomiting, etc.), in the diagnosis of endocarditis when appearing as a complication in acute articular rheumatism or in any other oligæmic disease, are of far greater importance than the physical signs hitherto alone considered as pathognomonic of the complicating malady. Why is it that in one series of such cases we have these symptoms present, and that in another, usually called mild, they are absent? Does this not tend to prove or corroborate the assertion that in the one the complaint is functional, in the other due to an organic lesion?

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of the intra- and extra-cardial circulation characteristic of mitral regurgitation. Such a patient will have to be under observation for some time before a definite diagnosis can be made.

The result of these important observations is a corollary of practical medicine, forming an additional link in the chain of diagnostic discoveries which during the last few years have been made by E. Seitz, Peacock, Da Costa, Fränkel, Black, Bornheim, Buresi, and others, who have freed the doctrine of dilatation and hypertrophy of the heart of the old dogma of organic valvular lesions.

507 FRANKLIN STREET.

NOTES OF HOSPITAL PRACTICE.

UNIVERSITY HOSPITAL.

SERVICE OF DR. H. C. WOOD.

MALARIAL PSEUDO-EPILEPSY.

THIS young gentleman, a private patient of mine, has consented to come before you to-day, as his case is one of considerable interest in regard to diagnosis, as well as from a therapeutic point of view. He was sent to me as an apparently hopeless case.

His history, as obtained from him, is very interesting and curious. He is of the nervous temperament, and has always had fairly robust health. He worked hard in the drug-business until August, 1881, when he was attacked with dysentery or enterocolitis. As a result of this appeared a paralysis, which took the form of paraplegia, and, therefore, was probably of spinal origin. It came on slowly, but after several days was nearly complete. He was unable to walk, or even to stand. There seems to have been with this paralysis also loss of sensation. It was probably a spinal palsy, which so frequently follows dysentery. I think it is almost as common as after diphtheria; at least I see more cases of dysentery-paralysis than of diphtheria-paralysis. This palsy, after lasting some months, gradually subsided, and he was soon able to go again into business in Cairo, which, as you all know, is in the southern part of Illinois. The city is situated on an island lying in the middle of the Mississippi River, whose waters in the autumn may be considered a well-prepared infusion of malaria. Almost everybody in Cairo suffers from malaria.

He remained here in good health, working from eighteen to twenty hours per day at his business of druggist, greatly overtaxing himself, until July, 1882, when he was taken with malarial fever. This malarial fever originally put on the ordinary type of the disease, with very severe chills. He took quinine for the chills in very large doses. He avers that he occasionally took one hundred grains of quinine a day, and that usually he took from forty to fifty grains. The fever, however, persisted, but disappeared finally on the approach of cold weather, in the latter part of November, while he still resided in Cairo. He had used quinia all along. When he left Cairo, much broken in health, he went to Pittsburg, and was there put on the use of a one-grain blue pill with quinia and capsicum. He remained on this treatment until December 6, when he was suddenly taken with some kind of an attack, the nature of which is not clear. He went to bed, not feeling in the slightest unwell, and became unconscious, in which state he remained for two weeks. He has no memory of what elapsed at this time. His friends tell him that he had convulsions which were repeated very often during the day; he was apparently steeped in convulsions. Ever since he came to himself he has been subject to convulsions.

It is necessary, and, indeed, very important, to determine the nature of these spells. They are irregular, not occurring at fixed intervals, but happening night or day,—sometimes five or six in twenty-four hours, and sometimes but one in two or three days; since they began, he has never been an entire week without them.

There is a very important point lacking in the history of this case: that is, as to the existence or non-existence, during the period of unconsciousness in Pittsburg, of fever. He, of course, can give no personal account, but has been told that he had no fever, and he states that he has had no fever since. I am inclined to think that the statement is not absolutely accurate, as, unless you use the thermometer, you cannot say that there is no fever.

When ill in Pittsburg, it is stated that our patient was supposed to have had tumor of the brain; but the suddenness of the illness and absence of paralysis make the diagnosis of tumor of the brain devoid of

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reasonableness. By the process of exclusion, and particularly by reason of the fact that the man had lived in a malarious region, I am led to believe that the Pittsburg attack was an irregular and unusual manifestation of malaria. Had the physician used the thermometer, he would probably have found the temperature one to two degrees above normal.

In 1876 a Frenchman at the Centennial International Exhibition was seized with an epileptic attack which put on the regular form of epilepsy and had all the evidences of a true epileptic convulsion. There was no past history of epilepsy; the man was 24 years old,—which is a singular age for epilepsy to come on without cause. After an examination of the case, I made up my mind that the attack was malarial in its origin, because the man had been exposed to malaria, and the convulsions occurred without previous history of such disorder and were periodic. Quinine effected a cure.

A malarial epilepsy may take on the type of true epilepsy; but in most cases underlying the convulsive attack you find fever,—not a high fever, but an elevation of perhaps one or two degrees.

If we had a history that the temperature during the long attack in Pittsburg was one to three degrees above normal, we should have strong evidence that the Pittsburg illness was an irregular malarial attack. To support our belief that he had fever, we find that in December last he was very thirsty; he wanted to drink all the time. He had no desire for food, but craved cold drinks. This is almost as good a proof of fever as if the temperature had been taken. In epilepsy we have a collapsed condition without thirst.

I believe in the present case that the convulsions are due, not to epilepsy, but to malarial poisoning. In order to make the reasons of my diagnosis clearer to you, I will analyze the case a little further. The patient is a man 24 years old. At this age true epilepsy develops very rarely. In men of twenty-four or over we rarely find true epilepsy as the cause of first convulsions, but some form of eccentric epilepsy, or syphilis, or tumor of the brain, or uræmic poisoning. Considering for the moment that the attacks are not of the nature of a true epilepsy, we will take up the other possible causes of the attacks. There is no history of syphilis, there is little or no headache, there is no loss of mental power, no loss of local power, no history of vomiting, no evidence of gross lesion of the brain, except the convulsions, which are not probably due to brain-lesion. We know that he has suffered from malarial poisoning; and that it is capable of producing symptoms such as we have in this case. There is no history of peripheral irritation, no albumen in the urine, no indication of Bright's disease: so that it seems to me that the diagnosis is confirmed. It is, again, confirmed in the curious character of the first attack. The two weeks' attack is not like epilepsy, nor like a gross brain-lesion. Epilepsy the first time it appears just shakes its victim, as a terrier does a rat: it does not hold on, like a bull-dog upon his prey. It knows that it can get another bite if it wants to.

The present attacks are not like typical epilepsy. There is no aura; there is no biting of the tongue, no foaming at the mouth. The absence of these symptoms is not sufficient proof that the man is not suffering from epilepsy, but each one is a grain of evidence, and by their accumulation the proof is obtained. Epilepsy is a general convulsion, during which the patient froths at the mouth and is apt to get the tongue between the teeth. If a convulsion of but one side of the body or of a part of the body occurs, the tongue usually escapes. Epilepsy usually takes on a general convulsion, and diseases similar to epilepsy have only a partial convulsion.

In the convulsion of our patient we had rigid rather than clonic spasms. They were not of the epileptic type. Epilepsy is a wild beast expending its fury. We had a degree of opisthotonus here which indicates a partially tetanic convulsion which is not epilepsy. The man during the attack had but partial unconsciousness; he would answer when spoken to. This does not occur in epilepsy. In true epilepsy the body is so occupied with the attack that it has no attention for anything else: it does not hear, or see, or know anything.

Now, enumerating the various factors which indicate that the case is one of malarial poisoning, we have:

First, a very distinct history of malarial poisoning in a man prone to neurotic attacks.

Second, the knowledge that malarial poisoning is capable of producing symptoms similar to those of the present case.

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Third, the case is probably not true epilepsy, on account of the age of the patient and the mode of attack,—not a simple convulsion, but a prolonged status.

Fourth, the probable presence of fever during the first attack.

Fifth, the very great frequency of the attacks.

Sixth, the attack does not conform to the typical epileptic convulsion. Thus, there is no aura; the convulsion is partial; there is no biting of the tongue; there is rigidity rather than clonic spasms; there is opisthotonus present; there is present a form of consciousness, although there is loss of memory of what has happened during the attack.

Seventh, there is no discoverable peripheral point of irritation to cause a reflex epilepsy.

Eighth, there are no symptoms of gross lesion of the brain; no choked disk; no headache; no loss of memory; no paralysis; no irregular contractions of the muscles; no dilated pupil; no vomiting; no giddiness.

Ninth, there is no history, nor are there any signs, of syphilis.

Tenth, nothing else fits the case; and, as we know that malarial poisoning can simulate many diseases, we must come to the conclusion that the present case is one of hystero-epilepsy dependent on malarial poisoning.

Examination of the spleen shows it to be enlarged.

Examination of the blood shows that the number of white in proportion to the red corpuscles is greatly increased. Whereas normally there are usually but 2.55 white to the 1000 red, rising after meals to 1 in 300 or 400, there is here one white to every seventy-five red corpuscles.

Having reached the conclusion that the case is one of hystero-epilepsy due to malarial poisoning, the next thing is to treat it. He had so much quinia that he was not only tired of it, but we thought it would probably do him no good. We therefore had put him on the oil of eucalyptus, which is also an antiperiodic. He was given a drachm of the oil per day. This, while having but little effect on the disease, disturbed the stomach and bowels, and caused at the time a feeling of malaise, lassitude, lack of energy, slight slowing of the pulse. It did not evince the antiperiodic influence which has been claimed for it. We shall take him off the eucalyptus and put him on full doses of quinia the next few days. We shall give him twenty-five grains of sulphate of quinia per day. Besides this, we shall give him the tincture of the chloride of iron, with some preparation of arsenic,—either Fowler's solution or the liquor arsenici chloridi. We have tried to stop the convulsive attacks with the bromides, and have failed. Most of the attacks at present occur at night. We shall now leave the bromides, and use chloral at night. We shall begin by using twenty-five grains, and, if this does not affect the head, we shall increase to thirty-five grains. [The patient rapidly recovered under the treatment instituted.—REP.]

TRANSLATIONS.

NERVOUS SYMPTOMS OF EXOPHTHALMIC GOITRE.—In summing up an admirable article upon some troubles dependent upon the central nervous system observed in patients affected with exophthalmic goitre, Dr. G. Ballet, after reporting some clinical cases, draws the following conclusions:

1. To the classical symptoms of exophthalmic goitre (over-action of heart, exophthalmia, goitre, trembling) there are quite often added others which, like those already mentioned, belong to a perturbation of the nervous system.

2. These symptoms are *convulsive* (epileptic or epileptiform) or *paralytic* (either hemiplegic or paraplegic); finally, in some instances, apparently quite often, there is, besides, *albuminuria*, *glycosuria*, or simple *polyuria*.

3. These convulsive or paralytic symptoms appear to belong not directly to Basedow's disease, but to another neurosis coincident with this (epilepsy, hysteria, etc.).

4. Certain convulsive phenomema (epileptic attacks), however, appear to be connected closely with the goitre itself. And the special clinical conditions under which they appear warrant the opinion that they are due to a cerebro-bulbar circulatory trouble, occasioned by the increased action of the heart.

5. For the rest, among the paralytic disorders, there are some which are light, such as weakness of the hands, or want of power, often transitory, of one or both superior extremities, or feebleness of the

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lower extremities, which may be directly attributed to the malady of Graves, whether it be merely a trembling of the extremities or more marked symptoms the result of transitory modifications in the cerebral circulation.

6. The polyuria, albuminuria, and glycosuria are probably much more frequent than has been supposed, and probably indicate trouble of the innervation of the bulb.

7. The malady of Graves appears to be simply one of those numerous symptomatic conditions by which a "nervous diathesis" is manifested; a symptom-complex which sometimes occurs isolated, at other times combined with other manifestations (epilepsy, hysteria, chorea).

8. There are grounds, however, for asking, in referring to certain facts, clinical (Féréol) and experimental (Filehne), if certain pons-medullary lesions are not of a nature to cause the symptom-complexus of Basedow?—There would then be, in this case, a complexus termed exophthalmic goitre, as well as a complexus termed hemianæsthetic, which, while one of the most frequent of the lighter manifestations of hysteria, in some cases at least indicates the existence of a material alteration, localized, as we know, at the level of the posterior third of the internal capsule.

ALOPECIA PREMATURA.—In a very interesting clinical lecture, Dr. Oscar Lassar discusses the etiology and treatment of early baldness, or alopecia prematura. From observation and experiment upon animals it was found that the disease is contagious, and occurs independently of any general affection or the state of health of the patient. The method of treatment recommended is as follows. The scalp is to be washed every day with tar soap, or soft glycerine soap, or with soap containing sodium iodide; the soap is to be thoroughly applied, and rubbed into the scalp for fifteen minutes. Following this is a warm douche; then by the application of a corrosive sublimate (2 pts. per 1000) the hair is dried, and a half per cent. spirit-solution of naphthaline is rubbed into the affected portions. Carbolic or salicylic acid may also be employed if desired.

If this treatment be adopted in the early stage, when the hair is just beginning to fall, it has usually proved successful, but it must be kept up for eight weeks or more. The fact that this disease is due to a communicable morbid principle has been brought up in order to show its conveyance by the comb and brush of the barber. —*Berliner Klin. Wochens.*, No. 16, 1883.

INJURIES OF THE TESTICLE.—Dr. Arteaga, in a recent thesis, lays down some important precepts for the treatment of wounds of the testicle. Traction should not be made upon any filaments of tissue at the surface of the wound, or the testicle may be completely emptied, as happened in a case reported by J. L. Petit. In case of an incised wound of the albuginea, several points of interrupted suture may be employed. When the testicle has been crushed, we should not be in a hurry to remove it, as it may recover; if the scrotum is torn and the testicle is exposed, it should be cleansed from any foreign bodies and restored to the scrotum. In cases where there has been loss of a portion of the testicle, whether by the original injury or by sphacelus, the testicle should be retained, although atrophy may follow. This point cannot be too strongly insisted upon. The organ should be preserved whenever possible, although it subsequently atrophies, for it is better to leave the man with the conviction that his genital organs are in a perfect state of integrity than to expose him to the danger of falling into a state of melancholy which might exert an unfortunate influence upon his general health.—*Revue de Thérapeutique*, No. 8.

TREATMENT OF CONDYLOMATA OF THE PENIS.—When flat condylomata appear on the penis, Nussbaum recommends washing them twice a day with salt water and subsequently dusting the surface with calomel. No pain attends this treatment, and the patients continue their ordinary occupations.—*Med. Zeitung.*

DYSPNŒA DUE TO SALICYLIC ACID.—Dr. Louvan, of Carlsbad, has met with several cases in which difficulty of breathing was due to the administration of moderate doses of salicylic acid; the breathing was labored and rapid.—*Berl. Klin. Wochens.*, No. 16.

LYMPH-HEARTS IN FŒTAL CHICKS.—Budge has detected lymph-hearts in the lymph-vessels of the allantois on the eighth day of incubation of fowls' eggs; at the more developed stage they are no longer to be found.—*Archiv für Anat. und Phys.*

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PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, MAY 19, 1883.

EDITORIAL.

A NARROW ESCAPE FROM ANOTHER "ETHER DEATH."

THOMAS MORRIS was injured at the Henry colliery recently by the premature discharge of a blast. His hip was broken, or dislocated, or otherwise seriously hurt, for the precise character of the trouble could not be determined by the local surgeon. On the following Sunday he was removed to the Wilkesbarre Hospital for better care and a consultation. As the man seemed quite comfortable, the examination and consultation were put off until Wednesday afternoon, and the hospital physicians were then about to enter upon the examination, and were discussing the propriety of administering an anæsthetic. To this the patient demurred, stating that his heart was weak, etc.; but, as the doctors deemed it necessary, it was decided to give the man ether. This decision seemed to affect the man strangely, and while they were still talking about the case he began to labor for breath, wanted windows opened, took on all the well-known phases of approaching dissolution, and in a few moments breathed his last. He had been suffering no pain in his injured hip, the physicians had hardly begun their examination, and no anæsthetic had been administered. It is the opinion of all present that he died of heart-disease, as a murmur had been discovered, that his death was possibly hastened by his dread of taking an anæsthetic, and that any mental shock would have had the same effect.

This death from the fear of anæsthetics has its parallel in a case reported recently by Surgeon-General Francis, of the Indian Medical Service. A drummer was suddenly aroused from his sleep by something creeping over one of his naked legs. He immediately jumped to the conclusion that it was a cobra, and his friends, collected by his outcry, not unnaturally thought so too, and he was treated accordingly. Incantations, such as are customary among the natives on these occasions, were resorted to, and the poor fellow was flagellated with twisted cloths on the arms and legs in view partly to rouse him, but principally to drive out the evil influence (spirit?) that for the time being had got hold of him. With the first light of dawn the cause of the fright was discovered in the shape of a harmless lizard, which was lying crushed and half killed by the side of the poor drummer. But it was too late. From the moment when he believed that a poisonous snake had bitten him he passed into an increasing collapse until he died. The drummer was not a strong lad, and the shock was too much for him.

CLINICAL TEACHING AT THE PENNSYLVANIA HOSPITAL.

WE are informed that, at a late meeting, the Board of Managers of the Pennsylvania Hospital decided to require the payment of an annual fee of five dollars from students attending the clinics of the institution. We confess surprise at this action, not so much because it seems unwise and uncalled for, since Boards of Managers are in their movements not rarely most mysterious, but because not many years since a similar resolution was adopted, and afterwards rescinded under the pressure of the resulting vacuum. The competition in clinical teaching is now much more severe than it was then. Excellent as is the corps of clinicians at the "Old Penn," they are in no way superior to various rival bodies,—if, indeed, they be equal to some of them,—and it requires no prophetic vision to see loneliness and desola-

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tion settling down upon the erst-time happy and well-filled lecture-rooms.

The plea upon which the resolution was adopted was the securing of new books for the library. At one time of immense importance to the medical culture of this city, this library has by the rapid growth of the library of the College of Physicians been rendered superfluous. If it were possible and wise to attempt to re-establish it, the Managers of the Hospital should get back from the general funds the accumulated library fund of over fifteen thousand dollars which, some years ago, they, with less or more show of right, confiscated to the general uses of the Hospital. The present effort is, to our thinking, wholly unwise: it will stop the attendance of students upon the clinic, and will achieve nothing for the library. No tickets sold, no income; emptiness of benches, and sorrow of heart,—which we trust will work repentance and rescinding.

LAW AGAINST CIGARETTE-SMOKING.

SUMPTUARY laws have never been remarkably successful, and we shall watch with interest the attempt which is being made in New Jersey to lessen the great evil of the use of tobacco by boys. The law recently enacted provides, with suitable penalties, "that hereafter no person or persons in this State shall knowingly sell any cigarette or cigarettes, or tobacco in any of its forms, to any minor under the age of sixteen years." We fear it will be difficult in most cases to prove that the tobacconist knew that the minor to whom he sold was under sixteen years of age. Minute street-gamins may, however, suffer affliction.

MOST of our readers no doubt noticed an editorial in our last issue concerning the mismanagement of the Marine Hospital Service. The important facts of the case as there stated seem, on further inquiry, to have been under- rather than over-pictured: more money has been wasted in connection with the New Orleans Hospital than we gave credit for. But in one thing we were incorrect: the money was furnished by direct Congressional appropriation, and did not come immediately from the Marine Hospital fund, derived from the earnings of sailors. We shall have more to say on this subject in our next issue.

LEADING ARTICLES.

SOME RECENT THERAPEUTIC APPLICATIONS OF THE NITRITE OF AMYL.

ALTHOUGH discovered in 1844 by Balard, the physiological effects of nitrite of amyl were not brought permanently before the notice of the profession until Guthrie called attention to them fifteen years later; its use in therapeutics appears to have been first suggested by Dr. Richardson, of London, in 1865. From a study of the pathology of angina pectoris, and the demonstration of the arterial spasm with the aid of the sphygmograph, Dr. Lauder Brunton in 1867 was enabled to construct that masterly synthesis, by which a depresso-motor and arterial dilator was applied to the relief of a condition of spasm, with entire success and great relief to the patient. Since this date amyl nitrite has held a recognized place in therapeutics, not only for cases of breast-pang, but also for other conditions for which its physiological effects and promptness of action render it particularly serviceable; among these are epilepsy, spasmodic asthma, the cold stage of intermittent fever, some cases of migraine; it has also been proposed for strychnia-poisoning and hydrophobia, and is said to have been successfully employed in tetanus. Mary Putnam Jacobi has found it serviceable in neuralgic dysmenorrhœa,—a disorder in which the remedy was first used by Dr. Fuckel. In cases of asphyxia, especially threatened asphyxia during chloroform-administration, the nitrite has been very successful, and has saved life.

The physiological action to which reference has been made may be briefly summarized here as follows. Amyl nitrite com-

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bines with the hæmoglobin of the blood-corpuscles, greatly reducing their power of carrying oxygen to the tissues; a direct action of the drug upon the muscular structures in the walls of the arterioles causes dilatation of these vessels everywhere, leading to lowering of arterial tension and temperature, and causing hyperæmia of various organs. The action of the heart becomes more rapid, and there is great throbbing of the arteries; if the remedy is pushed, the cardiac pulsations are rendered weaker, but death is caused by failure of respiration, due to a paralyzing effect upon the respiratory centre in the medulla, and to a general lowering of the reflex excitability of the centres in the spinal cord. The vessels of the head are rapidly filled with blood, there is headache, and the retinal vessels are much congested, showing a corresponding state of the blood-vessels of the brain. In some of the lower animals sugar has appeared in the urine after its inhalation, due, possibly, to dilatation of the blood-vessels of the liver, or to an effect, directly or indirectly, upon the centre in the medulla oblongata, discovered by Claude Bernard. If a toxic dose be given, or the inhalation be too much prolonged, the arterial and venous blood become both of the same color, owing to the interference with the oxygen-carrying function of the red blood-corpuscle; at the same time the temperature falls decidedly, and general muscular resolution may occur. Even minute amounts cause flushing, of the face, headache, tinnitus aurium, and sometimes vertigo.

The nitrite of amyl is almost exclusively used by inhalation, from three to five drops being dropped upon a handkerchief and held to the nose. The effect is almost instantaneous. The remedy may, however, be given internally in cases where inhalation is inappropriate, as in asthma, one or two drops being administered on a lump of sugar or in gelatin capsules. As the drug is apt to undergo change spontaneously, it should be frequently renewed; but the glass pearls containing the required dose of the amyl nitrite, which can be broken in a handkerchief, and will keep indefinitely, are probably the best form for dispensing. The danger of serious symptoms occurring from an overdose appears to be less when given by the mouth than when inhaled. A lady patient who swallowed a teaspoonful by mistake rapidly became collapsed, but was saved by frictions, flagellations, and tincture of opium.*

The fact that the effects of this remedy are so transitory has led Dr. Napoleon D'Ancona to recommend the frequent repetition of the inhalations, and by a judicious and systematic application of this agent he has succeeded in obtaining some remarkable results in diseases in which amyl nitrite had not been previously used. In a paper recently published, D'Ancona communicates the results obtained by the use of this remedy in disorders in which the prominent symptoms were high grade of dyspnœa and reduced activity of the heart, especially occurring in the course of acute febrile or inflammatory diseases of the respiratory organs.

The following is a summary of the cases:

Case I.—Man, 75 years of age, with pleuro-pneumonia, with cardiac enlargement (hypertrophy?) and valvular disease (mitral) with a history of heart-trouble. Seen on second day of pneumonia. Under ordinary treatment, the left lung became hepatized for about two-thirds of its extent. On the fifth day the symptoms were serious, the respirations were 52, pulse very rapid (uncountable). The ordinary treatment being continued, five drops of nitrite of amyl were administered, with immediate reduction of the rate of breathing to 40 per minute, and the pulse became slower and stronger, the improvement lasting half an hour. A repetition of the inhalation afforded relief for an hour. After this the inhalations were continued every half-hour or hour, day and night, until the morning of the seventh day, by which time the temperature, which had been 40° (104° F.). had fallen to normal. The patient now became convalescent, and fully recovered.

Case II.—Lady, 60 years of age, anæmic, with chronic mitral insufficiency; a frequent sufferer with hemicrania; probably had fatty heart. A bronchial catarrh reduced her strength so that on the twentieth day she fell into collapse (syncope) from exhaustion, with loss of consciousness, very weak action of the heart, and apparently on the point of death. The nitrite of amyl was used with immediate effect; it was repeated every half-hour for twelve hours, when the threatened danger was over, and she returned to her other remedies. She ultimately recovered.

Case III.—Man, 68 years of age, an alcoholic subject, admitted into the hospital with very weak dilated heart, pulse thread-like, œdema of feet. Diagnosis of chronic endocarditis, fatty heart, and bronchial catarrh. At night had serious attacks of dyspnœa, which became so frequent as to compel him

* Dr. Emmsville, British Medical Journal, 1880.

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to sit up at night. Nitrite of amyl, used as in the preceding cases, relieved the orthopnœa; the pulse became fuller and stronger, and a continuation of the remedy gave such relief that he was able to leave the hospital. Some time afterwards he perished of pulmonary œdema; and the autopsy confirmed the diagnosis.

Case IV.—Man, 72 years old, admitted in a very bad condition, suffering with acute pleuro-pneumonia of the right side, in a typhoid condition, with enlargement of heart and rigidity of arteries. Stimulants, quinina bisulphate, and a supporting treatment were given. On the sixth day, besides the signs of hepatization, diffused râles were found throughout the lung, and tracheal râles were heard; pulse thread-like, rapid; patient delirious, and in a state of prostration bordering upon coma. Twenty-four dry cups were applied, and the nitrite of amyl inhaled as in the preceding cases. Within twelve hours he had regained consciousness; there was free expectoration, and the pulse was stronger. Convalescence began on the ninth day. The amyl nitrite was not entirely suspended until complete recovery occurred, although the frequency of administration was greatly reduced as the pulse grew stronger.

Several other cases are referred to by Dr. D'Ancona, which it will not be necessary to repeat. He makes the significant statement that during the five years that he has used the nitrite of amyl in cases of respiratory disorder and cardiac disease, in all instances benefit was experienced, and no alarming symptoms ever appeared. He observed that, in the class of cases he referred to, the flushing of the face is less marked than it is in health; and more than once he noticed that under its use cyanosis of the lips and hands diminished or entirely disappeared.

From a consideration of the cases given, it is very evident that the usual caution contained in the text-books with regard to the administration of amyl nitrite to patients with brittle arteries is unnecessary, and that the dangers of the drug have been apparently greatly exaggerated. It seems that in cases of respiratory disorder, in which there is temporary heart-failure, good results may be obtained from the inhalation of a few drops of amyl nitrite, and that it may be repeated at intervals, guided by the state of the pulse, for several days, not only without injury, but also with distinct and permanent benefit. It may bridge over a temporary condition, and thus gain time for other remedies to act.

F. W.

NOTES FROM SPECIAL CORRESPONDENTS.

CHICAGO.

THE daily newspaper press of our city has, so far as can be remembered, always championed homœopathy or some other pathy with erudition peculiar. Just now, this engine of civilization is engaged in agitating the public mind upon a question of medical ethics by reflecting the biassed views of the New York radicals. The articles given in the Sunday edition of our papers are very amusing, at least to the medical mind. Such effusions usually consist of a good deal of advice to the "allopath," whom the editor generally dislikes, and much praise for the homœopath, whom he always likes; this advice, etc., is carefully seasoned with an account of "interviews" with leading (*sic*) physicians. As the result of some of the interviews, one says (a representative man) that he thinks the "invincibles" may succeed in establishing an unwritten code, and thus abolish all systems of ethics. "These New York liberals are willing to break down our code, because they would consult with anybody to get a ten-dollar fee. Nothing but trouble could arise from abolishing the code, for 'if you lie down with dogs you must expect fleas.'" A small doctor of the homœopathic order has "no objection to the effort to put both systems of medicine on a common footing." He claimed that the homœopaths were the regular, and not the *allopaths*,—that "the former studied the physiological *actions* of medicines on live men, and not on dead ones." Another homœopath said he was willing to consult with an allopath if he (presumably the allopath) was a gentleman. An official of our State Board of Health thinks the criticisms on the State Board, because of their having a homœopath on their Examining Board, unjust, and coming only from old fogies. He believes it would be better for these men to keep quiet, for the Board oftentimes *rejected all candidates* who were graduates of these so-called regular colleges, because they were found incompetent. This official is not a voting member of the Board, and fails to state whether the unsuccessful candidates were plucked by the homœopath or by the so-called allopaths.

At the last meeting of the Chicago Medical Society, Dr. Ingals read a paper giving extracts from the last report of the State Board of Health, upon which he commented to the end that the getting of diplomas was entirely too easy, and offered a resolution to the effect that proper measures be taken to secure action upon the appointment of a Board of Examiners, before which the students from all medical colleges should appear for examination for the degree, and that the Board should be composed of gentlemen having no connection with any faculty or school in

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the State. The discussion which followed strongly favored the measure, and a committee was appointed to confer with the State Board of Health.

After one of the most severe winters ever experienced in this part of the country, we are having a very backward spring,—low temperatures and east winds, more chilling and penetrating than those of the New England coast, prevailing for more than a month past.

May 10, 1883.

CORRESPONDENCE.

MESSRS. EDITORS,—Many years ago, at a time when cerebro-spinal meningitis was very prevalent, I, in an article in the *Medical Reporter* of this city, called the attention of medical men to the similarity, if not identity, of erysipelas and spinal meningitis. Occurring at a time when erysipelas was also very prevalent, and surrounded by all the circumstances calculated to produce erysipelas, I acted upon this principle, finding that under the usual treatment, even in the hands of the most skilful of our physicians, spinal meningitis was usually fatal. I gave tinct. ferri chloridi in doses of twenty to thirty drops every two hours in adult cases,—less, of course, for younger patients,—and was delighted to find my plan successful and my cases cured without leaving deafness, blindness, or paralysis of any kind behind. Certain I am that in those cases where these consequences are left it is owing to the disease not being entirely cured. A number of my cases were blind, deaf, and apparently insensible, and considered, by the attending physicians who called me in, as hopelessly dying, but got well in a comparatively short time without leaving a trace behind. In one case, a physician of some years' standing came after me to see his only son, twelve years old, whom he and his friend were attending. I found him deaf, blind, with a bladdery pulse, a washerwoman's skin, and evidently dying, and, as his father assured me, he felt confident he would die that night; yet, under the treatment of tinct. ferri chloridi, ten drops every hour, he got entirely well in a few days. In some of the cases the relief of the symptoms was attended by the appearance of erysipelas on the face and other parts of the body. In another case, an infant three years of age, the patient of one of our oldest and best-skilled physicians,—the other children all died under the usual treatment; the symptom most distressing, in connection with the other usual symptoms, was obstinate vomiting regarding everything as respects food and medicine,—was cured by three drops of the tinct. ferri chloridi every hour, afterwards five drops every two hours. Many other cases I could enumerate, if I did not fear to trespass upon your indulgence. I feel confident that with this remedy, a blister now and then to the nape of the neck, milk-punch, with general supporting treatment, and especially keeping the patient in a perfectly recumbent position until all sense of vertigo upon sitting up has ceased, most if not all of the cases of cerebro-spinal meningitis can be cured, leaving no bad effects behind.

Confident am I that, if physicians would give this treatment a fair trial, they would be satisfied that it is the only and the best treatment in this terrible disease, the bane of our medical men. I write this, Messrs. Editors, in consequence of reading in your journal, No. 403, May 5, 1883, an article copied from the *Deutsche Medicin. Zeitung*, March, 1883, upon "The Micrococcus of Cerebro-Spinal Meningitis," proving that the micrococci found in erysipelas and spinal meningitis were *similar*, and that their anatomical forms and their course present so many points in common, they should also be associated with analogous micro-parasitic forms. It also asserts that "pathological anatomy had established the analogy between meningitis and erysipelas, even before the parasitic element was talked of." Leaving these suggestions to be thought over by yourselves and readers, I again thank you for indulgence in allowing me to trespass upon your kind attention.

JOSEPH KLAPP, M.D.

622 SPRUCE ST., PHILA., May 8, 1883.

PROCEEDINGS OF SOCIETIES.

PENNSYLVANIA STATE MEDICAL SOCIETY.

THE recent meeting at Norristown, the thirty-fourth annual convention of the Medical Society of the State of Pennsylvania, was probably the largest ever held. More than three hundred delegates and members were registered. The papers were so numerous as practically to exclude discussions; and the quality of the papers was exceptionally high. The Society was honored by a banquet given by the Montgomery County Medical Society after the President's address; it also accepted an invitation to visit the State Hospital for the Insane for the Southeastern District of Pennsylvania, situated near Norristown, where a collation was served and the final session held. Several receptions were also given by private individuals. The sessions were held twice daily on the 9th, 10th, and 11th of May, the evenings being devoted to social entertainments. In reporting the proceedings we shall commence with the President's address, next giving an abstract of the papers read, and finally consider the business done.

THE PRESIDENT'S ADDRESS.

The annual address of the President, Dr. William Varian, of Titusville, was delivered

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at the court-house on the evening of the first day of the meeting. He said that thirty-five years ago there met in the city of Lancaster a small and earnest body of medical men who organized the Medical Society of the State of Pennsylvania and announced as their object "the advancement of medical knowledge; the elevation of professional character; the protection of the professional interests of its members; the extension of the bonds of medical science; and the promotion of all measures adapted to the relief of suffering, the improvement of the health, and the protection of the lives of the community." Some of the original founders of the Society were in attendance. From a few individuals, representing a half-dozen counties, they had witnessed its growth to a membership of nearly eighteen hundred, and its achievements in protecting the public health and elevating the standard of the profession. Nevertheless, charlatanry and superstition still prevail almost unchecked, and men and women daily sin against the laws of health. He advocated the enforcement of sanitary laws and the diffusion of knowledge in order to prepare the minds of the people for more enlightened legislation upon these great subjects connected with State medicine.

Among the hygienic problems of the future none is more important than the disposition of the dead. The solution is given in the single word "cremation." By committing all refuse animal matter to the fire much would be done to lessen the dangers and ills of the human race. Within the domain of State Medicine the abuse of alcohol is also comprehended. If the question of how to restore the inebriate to a condition of mental, moral, and physical health were answered, crime would be diminished from sixty to eighty per cent. and the expenses of the Commonwealth largely reduced. The subject is one which has not received sufficient attention at the hands of medical men. He did not propose to elaborate a treatment, but simply to suggest the subject as one worthy the attention of those able and experienced men who make mental diseases a study.

Among the boons which the science of medicine had conferred upon the human race, none was greater than the practice of vaccination. Yet even here the fashion of the day had made its changes. During the past ten years humanized virus had been driven nearly out of use and almost entirely supplanted by the presumably purer and more potent animal virus. But unless greater care is exercised in the production and preservation of this favorite virus, and intelligent inspection and jurisdiction exercised over all vaccine farms, the time is not far distant when the advocates of exclusively animal vaccination will see their "vaccine boom" share the fate of numerous other medical theories which have had a brief existence. He gave some details of his own experience, and expressed the belief that the humanized virus was more certain in its effects and less liable to produce unpleasant results than the bovine lymph.

In respect to education, he said that the importance of establishing a chair of State Medicine and Hygiene should be urged upon all medical schools, and attendance at lectures on the subject made obligatory. The schools should also be influenced to insist upon not less than three full years of attendance at medical lectures before granting a diploma. He also urged that measures should be taken for the prompter publication of the proceedings of the Society.

In reference to the "Code of Ethics," he said,—

"The action of the medical society of a neighboring State, in throwing down the barriers which had been so long maintained between the science of medicine and legalized dogmatism, received from you at your last session an expression of unanimous disapproval. The renewal of this action by the same society, together with their refusal to appoint delegates to the National Association, renders it necessary that you should again express your reprobation at their persistence in wrong-doing, in language that cannot be misunderstood."

Addressing himself to those members of the audience who were not members of the medical profession, he explained that the meetings of the Society had for their object the devising of the best measures that science and thought could contrive to protect and relieve the people from disease. Young men should be discouraged from beginning the study of medicine until they have undergone such careful preparation in the classics and natural sciences as would fit them to understand and master thoroughly the technicalities of its art and science. They should be urged to master their profession, and discouraged from all desire for hastily-obtained diplomas. The public could also further the objects of the Society by supporting all legislation having for its object the arrest of the spread of contagious diseases, the purification of the source of water-supply, the abatement of nuisances prejudicial to health, the sanitary inspection and control of school-houses and buildings of public accommodation and support, and the care and cure of those who by misfortune or disease had become the wards of the people. He urged the establishment of chairs in colleges of tried and deserved reputation, in preference to the founding of new colleges.

In conclusion, he spoke of physicians as divided into two classes, those who made a specialty of the science of medicine, and those who made a specialty of the art of healing. At the present moment the advance of the scientific investigator is perhaps the more rapid. Outside of the surgical branch of the profession, which is making wonder-

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ful progress, the microscopist, the chemist, and the physiologist are probably making the most marked impression upon the medical thought of the age. They are accumulating material with such rapidity that the others can scarcely sift and test it; the equilibrium, however, will not be long displaced, and meanwhile, he continued, let it be our aim each in his chosen field so to do his individual part to advance and sustain the noble science of medicine, that those who come after us will look upon our work with gratitude and reverence, as that of men who did their duty to the profession and who lightened the labors and cares of their successors.

SCIENTIFIC PAPERS.

The Wearing out of Vaccine Protection, and the Efficiency of Revaccination, by Dr. William M. Welch, Physician to the Municipal Hospital, Philadelphia, was a communication of which the character and scope are well expressed by its title. The statistics of smallpox hospitals show that a large number of cases occur in persons who have been vaccinated in early life, the maximum number occurring shortly after puberty. He had seen smallpox occur in patients presenting more than twenty typical vaccine marks, and he had known death to occur when as many as twelve such marks were present. He believes that vaccinia loses its protective power by long transmission through human subjects; humanized virus is more or less deteriorated virus. He urged revaccination with good animal lymph at puberty, as affording the best protection.

Malarial Hæmaturia, by Dr. James Tyson, was given as the Address in Medicine, based upon seven cases seen in the Middle States, but giving in the systematic study of the disorder a brief reference to the malignant form as it occurs in the Southern States, in the malarial regions. The disorder generally occurs in men, is traceable to malarial exposure, and is characterized by the paroxysmal or continuous discharge of bloody urine, which may or may not contain blood-corpuscles, and may or may not be ushered in by chills. Hæmatogenic jaundice may appear, followed by fever and collapse. The treatment is by quinine aided by mercurials. Carbolic acid and morphia may be required to relieve the vomiting. Stimulants are usually needed; turpentine has been tried, and with asserted good results.

Some Obstetrical Notes were read by Dr. R. L. Sibbett, of Carlisle, based upon the statistics of one hundred consecutive cases of confinement. It was offered as a contribution to the literature, and in the hope that others might communicate their experience, and that ultimately sufficient cases would be reported to draw some definite and useful conclusions as to treatment.

Artificial Alimentation of Infants was the subject of a lecture by Dr. Hugh Hamilton, of Harrisburg. He studied the chemistry and physiology of infants' diet, and condemned much of the food given as unsuitable. He recommended good cow's milk, with a small proportion of cream and milk sugar added; if not distinctly alkaline, sodium bicarbonate should be dissolved in it, and the solution heated to 131° F. before feeding.

Insane Asylums in some of their Relations to the Community, by Dr. R. N. Chase, of Norristown, was an able discussion of some of the topics of the day in connection with insane hospitals. He utterly rejected the popular delusion that persons of sound mind are frequently sent to institutions for the insane and detained through sinister motives. Among three thousand patients coming under his personal charge, he had not encountered a single instance of improper confinement.

Simple Methods of Treatment of Club-Foot was the subject of a demonstrative address by Dr. De Forrest Willard, of Philadelphia. He insisted especially upon early treatment by manipulation, which will often cure the case before it gets old enough to have tenotomy performed. Treatment begins on the day after birth, by moulding and stretching the foot by the mother or nurse. The action of the hand may be supplemented by a cheap apparatus consisting of bracelets of printer's blanket, between one and two inches wide, placed one just below the knee, the other on the foot near the extremity. These two are to be connected by a rubber strap just strong enough to keep up a slight traction in opposition to the contractured muscles, and in the direction of the weaker group of muscles. Other material, gutta-percha, sole-leather, or cloth, may be substituted for the "blanket."

The Address on Surgery, by Dr. A. Craig, of Columbia, contained a review of some recent operative procedures, and especially considered conservative surgery, the treatment of fractures, the proper methods of administration of anæsthetics, and the treatment of accidents during anæsthesia.

Some Remarks on Scarlet Fever, by Dr. E. O. Bardwell, of Emporium, was read by title only.

A Deformity that sometimes follows Outward Dislocation of the Foot was brought to the attention of the Society by Dr. E. A. Wood, of Pittsburg. Cases of sprain or contusion are sometimes followed by enlargement of the lower end of the tibia and widening of the inter-malleolar space, so that the foot rocks outward in the condition of talipes valgus. This is also associated with laceration or destruction of the internal lateral ligaments. The use of permanent dressings continued for a year or more was recommended.

A Contribution to the Study of Typhlitis and Perityphlitis was read by Dr. William Pepper, of Philadelphia. He considered briefly the pathology and diagnosis of this disorder, but

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dwelt particularly upon the need of careful treatment, especially absolute rest and a carefully-restricted diet until convalescence is established, on account of the liability to relapse. He was convinced that cases of typhlitis can safely be trusted without the use of laxatives for several days, and that much harm has often been done by the use of even mild laxatives. This class of cases is more of a surgical than medical character. The time for performing the operation cannot be definitely stated; but if after eight or ten days signs of inflammation become apparent, an incision may be made into the abscess. He gave a description of the symptoms and treatment of several cases which had been under treatment.

The Thorough Removal of Cancer of the Breast was advocated by Dr. S. W. Gross, and several cases were exhibited showing the good results of this precaution. In one the operation had been performed nearly five years ago, and the cicatrix is still smooth and soft. In the paper he advocated the amputation of the entire breast, with its superjacent skin and fat, no matter how small the growth may be or how sound the skin may appear, along with the removal of the fascia of the pectoral muscle, and opening the axilla, with a view to cleaning it out if the glands are found to be invaded by the disease. This mode of operating is indicated, because the remains of the breast, the fat, skin, pectoral fascia, and axillary glands, are the seats of recurrence, or rather of the continuous growth of portions of diseased structures which are left behind in the operations as usually performed. For these reasons the operation which he suggests is alone adequate to effect riddance of the tissues in which reproduction takes place.

The Treatment of Purulent Pleural Effusions, by Dr. James C. Wilson, urged the establishment of a thoracic fistule as early as possible, to allow of free drainage of the cavity, which is to be washed with an antiseptic solution, preferably of bichloride of mercury (1–5000). A patient was exhibited showing the method of treatment.

The Medical Service of Insane Hospitals was considered in a paper by Dr. Charles K. Mills, of Philadelphia, in which he discussed the necessity of the individual investigation of patients in such hospitals, the importance of a larger resident staff, the advisability of having a competent consulting board and a pathologist and microscopist, and similar matters. Some of the suggestions and provisions reported by Governor Hoyt's commission to examine into the present system for the care of the insane in the State were commented upon, some being advocated, others criticised.

The Address on Obstetrics, by Dr. George O. Moody, of Titusville, was an able and comprehensive address upon a number of topics connected with midwifery, particularly abortions (advocating early and complete evacuation of uterus); forceps (advising caution, but not delay, when their use is necessary); puerperal convulsions (preferring chloral and potassium bromide to venesection); support of perineum to prevent laceration (with the use of opium or anæsthetics in appropriate cases); extra-uterine pregnancy (advising electricity, or, if rupture and hemorrhage occur, laparotomy and ligation of the placental base before removal; at full term of abdominal pregnancy delivery may be accomplished in the same way; if fœtus is dead, it is left to nature, unless accidents arise demanding interference); oxytocics (commending hypodermic use of a new alkaloid of ergot); laceration of cervix, post-partum hemorrhage, placenta prævia, and antiseptic midwifery.

The Address on Hygiene, by Dr. Henry Leffmann, was an exceptionally good address upon topics affecting the general health. He said that temperance and fresh air are the best agents to enable the organism to resist disease. The proper way to dispose of dead bodies is by cremation. The modern inventions for disinfecting purposes are worth little. They are gotten up by inexperienced and unscientific men for speculative purposes, and are worth really only a small fraction of the amount of money demanded for them. The dread of a draught and the dangers arising from it are more imaginary than real. A cold is often caught from too close confinement rather than from exposure. The lowering of a window in a bedroom was advocated. It is better by far to do this than to sleep in a poorly-ventilated room. In the German army, during a pestilence the patients who were treated in the open air did much better than those who were attended to within-doors. The notion that night-air is detrimental to health is false and mischievous. The only chance that many working-people have to get any exercise in the air is after the day's work is over.

Our Asylums and Insane was discussed by Dr. Samuel Ayres, of Pittsburg. He said that of late much dissatisfaction was expressed through the daily press with the management of asylums. He did not deny that ground for this existed; he thought that it was only too true in many instances. The superintendent of an asylum should be a man of humane and scientific character, who should give his whole time to the medical care of his patients. The attendants ought to be persons of unexceptionable character, and they should never be allowed to be inconsiderate or cruel to those under their charge. The superintendent, through his neglect of duty, or by reason of conflicting duties, is often to blame for cruelties which could be avoided by judicious management. The practice of establishing consulting boards is a good idea. Each hospital for the insane should have a staff of consultants, consisting of one gynæcol-

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ogist, one general practitioner, one surgeon, and two specialists in nervous disorders, constituting a consulting board of five members. They should meet at least once a week, not for the purpose of mere dress-parade and to sign rosy reports, but to work and become better acquainted with the diseases of those who are committed to their care. Overcrowding insane asylums is too much practised, and should not be tolerated. Putting five or six insane persons in one room is a dangerous thing, and it is a great wonder that we do not hear of more homicides. A little more zeal among resident physicians in our asylums would be a good thing; and there should be a greater proportion of physicians to patients. Instead of having one physician to three hundred or more patients, there should be two or three.

Surgical Expedients in Emergencies was the subject of a paper by Dr. R. J. Levis. He showed a catheter made of a piece of wire doubled upon itself and properly curved; also a female catheter of rye straw tipped with sealing-wax, with a fenestra cut in the side; a method of plugging the nares with sponge; treatment of fractures, hemorrhage, etc. The expedients were many of them very ingenious and excited much applause.

Ophthalmological Observations during Ten Years' Service in Wills Eye Hospital, by Dr. P. D. Keyser, contained an analysis of over two thousand cases, with the clinical notes of some of the more important and interesting.

Remarks on the Cure of Rodent Ulcer, with a Presentation of Cases, by Dr. Joseph Hearn, was a practical demonstration of the value of excision, or cauterization with caustic potassa.

The Hair, its Use and Care, was the title of a paper by Dr. J. A. Shoemaker, who discussed the physiology and hygiene of this important subject.

The Diagnosis, Prognosis, and Treatment of Mitral Constriction was systematically presented by Dr. J. T. Eskridge, of Philadelphia.

Lithæmia was considered by Dr. James B. Walker, of Philadelphia, and its nervous symptoms especially dwelt upon. Lithia salts, Vichy water, and a vegetable diet were recommended. For the nervous symptoms bromide of potassium was considered preferable to opium or its salts.

Clinical Notes on Convallaria Majalis, by Dr. Edward T. Bruen, of Philadelphia, contained the notes of a number of cases of the several forms of heart-affection treated by this agent. It is pronounced to be a valuable heart tonic, slowing, regulating, and strengthening the cardiac contractions. No effect was observed directly upon the dyspnœa. It was given in doses of fifteen to twenty drops of the fluid extract, and was most useful in cases of mitral regurgitation.

The Possibility of Abnormal Ocular Conditions, through the Sympathetic System, impairing the Functions of the Uterus, was brought out in a communication by Dr. William S. Little, of Philadelphia, and several curious cases reported in confirmation.

The Hygienic Management of Consumption, by Dr. J. M. Anders, of Philadelphia, advocated the cultivation of house-plants, especially thin-leaved foliage varieties. The necessary exposure to sunlight, and the modifying of the local climatic condition by the growing plants, was shown to have a very favorable influence upon consumptives. From inquiry among horticulturists, it was ascertained that phthisis is rare among laborers in hot-houses; and a strong hereditary tendency may be overcome by engaging in this occupation.

BUSINESS.

An address of welcome was delivered by Dr. Hiram Corson at the opening of the session, on behalf of the Montgomery County Medical Society.

A report of the committee on a State Board of Health was read by Dr. Benj. Lee, chairman. He stated that the committee, warned by previous failures, had taken pains that the bill presented to the Legislature should be as free as possible from all objectionable features. It was made as brief as was consistent, its provisions were made as far as possible general, rather than specific, and the amount of expenditures which it proposed was ridiculously small in comparison with the grandeur of the ends to be attained. The bill was introduced into both branches of the Legislature, and the committee held personal interviews with several members of the Senate and House of Representatives. They demonstrated the advantage it would be to the commonwealth, and did everything in their power to have it passed. The measure was rapidly making friends in both houses, when an amendment was offered proposing to recognize by name, and to make it obligatory on the Governor to appoint upon the Board, the adherents of an exclusive dogma in medicine. This was met with opposition by the medical members of the Legislature, and the bill, after being subjected to a number of amendments, was finally lost. No previous bill on this subject had received so much attention, or been so fully discussed. The committee feel confident that the seed thus sown will eventually bear fruit. The report was closed by an appeal to the members of the Society, and of the editorial fraternity, to urge the necessity of a central sanitary supervision in this State, and of the saving of health, life, and wealth which would be effected by it. If this were done, there can be no reasonable doubt that success would crown the long-continued efforts of the Society.

The report of the committee was received, and the committee discharged.

A lengthy report from the delegation to the American Medical Association, which met at St. Paul, Minnesota, last June, was read.

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The Committee of Arrangements presented the programme as its report. On motion, the report was accepted.

Dr. Mark Nardyz was invited to a seat on the floor.

Dr. J. G. Lee, the corresponding secretary, reported the receipt of a letter from the Chester County Medical Society, giving a schedule of the studies in which a person was obliged to be examined before being admitted as a student of medicine.

Dr. Benjamin Lee, of Philadelphia, stated that the Philadelphia Medical Society, the custodian of the library of the Pennsylvania State Medical Society, experienced great difficulty now in procuring a place for the rapidly-accumulating collection of books. He moved that the correspondents of the library be authorized to procure a room in which to store the books. A motion was adopted to refer the matter to a committee consisting of the librarian of the Philadelphia County Medical Society and the treasurer of the State Medical Society.

The Committee on Publication reported that it had seventeen hundred copies of the Transactions of 1882 printed, and that of this number all had been distributed with the exception of forty-six volumes.

Dr. O. H. Allis, chairman of the special committee, read the schedule of subjects for preliminary medical examination.

On motion, this committee was directed to confer with the nominating committee, which had just reported, to devise some plan whereby a regular schedule for the preliminary examination of medical students may be adopted, so as to prevail in the County Societies throughout the entire State.

The reports of the County Medical Societies were received and referred to the Publication Committee.

The following, which was presented by Dr. Mills at the last meeting, was adopted:

"*Resolved*, That Rule IX. of the Rules of Order be amended so as to allow a suspension of the rules by a two-thirds vote of the members present."

Dr. William Marshall, of the Delaware State Medical Society, was introduced, and took a seat on the platform.

A bill of $41.46 from the Committee on the State Board of Health was presented, and an order passed for its payment.

Dr. Henry H. Smith, formerly of the University of Pennsylvania, offered the following resolutions, which were unanimously adopted after a brief discussion:

"*Resolved*, That the State Medical Society of Pennsylvania reaffirms its approval of and adhesion to the Code of Ethics adopted by the American Medical Association.

"*Resolved*, That organized opposition by local societies or by individual members to the code approved by the Medical Association of the United States is rebellion against the constituted authorities, and should be so treated.

"*Resolved*, That the secretary be instructed to forward a copy of these resolutions to the Committee of Arrangements at Cleveland, for presentation to the Association."

Dr. Benjamin Lee exhibited two forms of pen-holders to assist persons suffering with writer's cramp, one having a large ball to hold in the palm of the hand, the other having a series of rings, into which all the fingers are to be introduced.

On the second day Dr. Hiram Corson presented a communication from the Anti-Vivisection Society, which was on motion referred to a committee consisting of Drs. S. Weir Mitchell, H. C. Wood, E. A. Wood, and Wm. S. Little.

On motion of Dr. W. W. Keen, the Legislature of Pennsylvania was urged to pass the Anatomy Act.

On motion of Prof. S. D. Gross, resolutions were adopted directing the secretary to appeal to Congress in behalf of the Medical Library of the Surgeon-General's for its maintenance, and especially for the construction of a fire-proof building. He subsequently offered another resolution, calling upon County Societies to take steps for the proper education of nurses.

The treasurer announced a balance on hand of $2363.84.

The following amendment, proposed by the Philadelphia County Medical Society, was received:

"*Resolved*, That no documents be presented before the State Society that have not been read before a County Society and been recommended by said County Society."

This amendment to the by-laws lies over for one year.

Resolutions of respect were entered upon the minutes with reference to the death of Dr. David Shrack.

After considerable discussion, the Society adopted the schedule of subjects for preliminary examination proposed by the committee. Hereafter, students, before engaging with a preceptor, will be required to pass an examination before the County Medical Examining Board, as follows: 1, candidate's previous course of study; 2, an essay; 3, an essay written from dictation; 4, spelling, oral and written; 5, reading; 6, geography; 7, political economy; 8, history, ancient and modern; 9, geology; 10, botany; 11, chemistry; 12, natural philosophy; 13, mathematics:—arithmetic, complete; algebra, through quadratic equations; geometry, through plane geometry; 14, languages, English, Latin, and Greek, the quantity of the latter to be at the discretion of the Examining Board.

Upon motion, copies of this schedule of the Pennsylvania State Medical Society were directed to be sent to each and every member of county medical societies in this State.

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A communication from the West Philadelphia Medical Society in support of the American Code of Ethics was directed to be entered upon the minutes.

The chairman of the Committee on Medical Legislation presented a report, and requested that the committee be discharged. The report was received and the committee discharged.

Dr. Benjamin Lee offered a series of resolutions, which were adopted, expressive of confidence of the profession in the ability and devotion of the medical officers of hospitals for the insane, and calling upon the Legislature for sufficient appropriations to increase the efficiency of the medical service.

In conformity with a resolution of Dr. John Curwen, the President of the Society was requested to appoint a committee of three members on each of the following subjects: medicine, surgery, diseases of women and children, insanity and idiocy, and ophthalmology. The duty of the committees shall be to prepare a series of questions calculated to obtain the history and treatment of the different forms of disease. The President named the following

STANDING COMMITTEES FOR 1884.

Insanity and Idiocy.—John Curwen, J. N. Kerlin, S. S. Schultz.

Medicine.—James Tyson, C. K. Mills, A. H. Chase.

Surgery.—R. J. Levis, S. M. Ross, James McCann.

Diseases of Women and Children.—A. H. Smith, William Goodell, C. A. Rahter.

Ophthalmology.—C. S. Turnbull, P. D. Keyser, J. A. Lippincott.

Nervous Diseases.—S. Weir Mitchell, J. S. Stewart, J. Z. Zeigler.

TO DELIVER ADDRESSES NEXT YEAR.

On Medicine, M. H. Daly, Pittsburg.

Surgery, John B. Roberts, Philadelphia.

Obstetrics, Jacob Price, West Chester.

Hygiene and State Medicine, J. G. Lee, Philadelphia.

Mental Disorders, Alice Bennett, Norristown.

Ophthalmology, W. S. Little, Philadelphia.

OFFICERS FOR 1883.

The following officers were chosen for the ensuing year:

President.—Henry H. Smith, of Philadelphia.

Vice-Presidents.—Ellis Phillips, of Schuylkill Haven; H. B. Van Valzah, of Clearfield; J. W. Kerr, of York; S. S. Schultz, of Danville.

Permanent Secretary.—William B. Atkinson, of Philadelphia.

Recording Secretary.—Morris S. French, of Philadelphia.

Treasurer.—Benjamin Lee, of Philadelphia.

Corresponding Secretary.—John G. Lee, of Philadelphia.

Additional Members of Committee of Publication.—Hugh Hamilton, of Harrisburg; James Tyson and C. S. Turnbull, of Philadelphia.

Judicial Council.—A. Rothrock, of McVeytown; G. O. Moody, of Titusville; and William Pepper, of Philadelphia.

Philadelphia was fixed as the place of meeting next year, and Dr. John B. Roberts was appointed chairman of the Committee of Arrangements.

Delegates to the American Medical Association.—S. R. Rutledge, of Blairsville; J. L. Stewart, of Erie; R. A. Campbell, of Lewistown; George F. Horton, of Terrytown; W. S. Roland, of York; J. W. C. O'Neal, of Gettysburg; R. Rothrock, of Middleburg; R. L. McCurdy, of Freeport; W. T. Bishop, of Harrisburg; David Englemann, of Easton; E. A. Wood, T. J. Gallagher, and John Semple, of Pittsburg; J. Willis Houston, of Oxford; Thomas Lyon, of Williamsport; J. T. Shepler, of Dunbar; Oscar H. Allis and H. St. Clair Ash, of Philadelphia; H. W. McReynolds, of Bloomsburg; J. W. Tweedle, of Weatherly; J. C. Sheridan, of Cambria; C. Leuker, of Schuylkill; R. H. Chase, of Norristown; Harvey Kratz, of Hilltown.

Delegates to the Delaware State Medical Society.—Henry Price, of Kennett Square; W. G. Porter, J. C. Wilson, L. K. Baldwin, and J. A. McFerran, of Philadelphia.

Delegates to the Massachusetts State Medical Society.—E. P. Allen, of Athens; P. B. Breining, of Bethlehem; Alice Bennett, of Norristown; G. K. Halberstadt, of Pottsville.

Delegates to the Medical and Chirurgical Faculty of Maryland.—Hugh Hamilton, of Harrisburg; C. F. Spauler, of York; Edward Jackson, of West Chester; E. T. Bruen, of Philadelphia; R. S. Seiss, of Littlestown; F. P. Henry, of Philadelphia.

Delegates to the Ohio State Medical Society.—C. B. Kibler, of Coney; J. G. Cunningham, of Kittanning; Charles T. Hunter, of Philadelphia.

Delegates to the New Jersey State Medical Society.—Thomas D. Dunn, of West Chester; H. H. Whitcomb and E. M. Corson, of Norristown; Henry Leffmann, J. T. Eskridge, and Joseph Hearn, of Philadelphia; G. D. Nutt, of Williamsport.

Delegates to the West Virginia State Medical Society.—George Stiles, Conshohocken; W. J. Asdale, Pittsburg; Charles S. Turnbull, Philadelphia; Frank Ehrenfield, of Indiana.

After the installation of new officers, and the usual votes of thanks to entertainers, the Society adjourned to meet May 13, 1884, in Philadelphia.

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NEW YORK COUNTY MEDICAL SOCIETY.

A STATED meeting was held April 23, 1883, DAVID WEBSTER, M.D., President, in the chair. The scientific paper of the evening was read by Dr. D. B. ST. JOHN ROOSA, and was entitled "*The Effect of Noise upon Healthy and Diseased Ears.*"

The author first referred to the work of Willis, published over two hundred years ago, in which reference was made to the fact that certain persons could hear better in a noise than in quiet, the explanation of which was supposed to be due to greater tension placed upon the drum-membrane. Similar observations had been made since his time, and had led to the adoption of the term "paracusis Willisiana." Willis's explanation of the phenomenon, however, had by no means been universally accepted; nor, indeed, had his observation of clinical facts. Kramer, and others, attributed the ability to hear better in a noise to a torpid state of the acoustic nerve, while Burnett, of our own country, considered it as a symptom of the later stages of chronic middle-ear disease. Tröltsch believed that hearing better in a noise was not common; Dr. Roosa's experience, however, had proved that it was of frequent occurrence. Holt, of Maine, in an article read before the last meeting of the American Ophthalmological Society, doubted the correctness of observations in this direction, and did not believe that the hearing was ever improved in noise. Politzer had no doubt as to the existence of such cases, and confirmed the author's observations in this direction, published some years ago in the first edition, and in subsequent editions, of his book. The author had related the results of his personal observations in this direction, and had mentioned cases where, beyond a doubt, the patient was able in the din and noise of a railway-train to hear better than in the quiet of the home. At this point he stated that the reason why the observation had related specially to persons with chronic middle-ear disease was the fact that persons with disease of this portion of the ear in the acute stage were not likely to be found about railway-trains and other noisy places; but that they were equally able to hear better in a noise he had no doubt. The author had observed some cases in which the drum-membrane was found perforated, yet the patients were able to hear better in a noise; and this fact disposed at once of the theoretical explanation of the phenomenon as advanced by Willis. The author believed that the phenomenon occurred only in cases of middle-ear disease: he had never known a case in which the acoustic nerve was affected and the patient was better able to hear in a noise. Politzer's explanation, that the ossicles of the ear were excited into abnormal action, seemed to him to be the only one, however difficult it might be perfectly to understand, which was not invalidated by clinical facts.

Dr. Roosa then referred to some illustrative cases, in which the patient suffering from middle-ear disease was better able to hear in a noise. A young man, while a student at college, accidentally learned that he could hear much better while riding in a carriage or on a railway-train, and could understand without difficulty what his companions said when they spoke in an ordinary tone of voice, whereas in the quiet of the home he could hear only when the voice was raised to a very high pitch. A lawyer, finding that deafness interfered with his professional duties, left that pursuit and accepted a position on a railway-train, where, in the midst of the noise, he could hear ordinary conversation distinctly. Both patients suffered from middle-ear disease. These cases were so numerous that to record them simply filled up the physician's case-book; they existed by the thousand, and he regarded it as unnecessary to give any particular number which had been observed.

The foregoing facts would naturally lead us to suppose that hearing better in a noise would equally apply to persons who work in noisy places, as to boiler-makers, etc.; and the author himself, when he first published his observations upon hearing better in a noise, was led to this theoretical inference, and had made a statement to that effect, and thereby placed himself among those who had added confusion to the subject. Had he limited his remarks strictly to observed facts, they would have been in every respect correct. Observations since made had gone to prove that boiler-makers, and others working at a noisy occupation, did not hear better in a noise, and, in fact, found relief in quiet. Dr. Holt's observations led to this conclusion, which was further confirmed by those of Dr. Roosa made since Dr. Holt published his paper. Dr. Holt was inclined to attribute the impairment of hearing in this class of persons to disease of the middle ear, which, however, Dr. Roosa did not believe existed in them more commonly than in those engaged in other occupations. That is to say, he did not believe that their occupation had any particular tendency to produce disease of the middle ear. But the very fact that they did not hear better in a noise was incidental proof that they suffered from a lesion of the labyrinth; and such he had found to be the fact. Those whom he had examined engaged in this occupation were often so sensitive to the noise made by the hammer that it sent a shock throughout their entire nervous system, and they were so far from being able to hear better in the noise that they had invented a large number of signs, made with the hand, in communicating with one another. But that persons suffering from disease of the middle ear, and better able to hear in the noise of a railway-train, were equally better able to hear in the noise of a boiler-maker's shop, was proved by observations which he had made upon such

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patients. A lady in a manufacturing town in Pennsylvania, deaf from middle-ear disease, at his request visited a boiler-maker's shop with her husband, and found that she could hear conversation there in an ordinary tone of voice, while her husband could scarcely hear when screamed to. She concluded her letter by saying that she thought railway-trains and boiler-makers' shops should be her home.

Dr. Roosa then illustrated with the blackboard the method of diagnosing between disease of the middle ear and of the acoustic nerve by the use of the tuning-fork, and stated that where the tuning-fork could be heard better through the air than through the bones of the head it was indicative of disease of the labyrinth or acoustic nerve. He believed that this method of differential diagnosis was an important and a trustworthy one, and upon it largely depended the inferences drawn in this paper. He had seen boiler-makers who suffered from so-called boiler-maker's deafness, who had impaction of wax in the ears, and before its removal they were better able to hear the tuning-fork through the bones of the head, whereas after its removal the tuning-fork was heard better through the air.

DISCUSSION.

Dr. KNAPP, being requested to open the discussion, said that the value of the paper rested largely upon experimentation and observation, which it would be necessary to repeat in order to discuss it intelligently.

Dr. BRANDEIS said that the experiments which he had made had led him pretty much to the same conclusions that Dr. Roosa had arrived at. He was present when Dr. Holt read the paper to which reference had been made, and he ventured at the time to take issue with Dr. H., believing that in the majority of cases of boiler-maker's deafness the disease was not one of the internal (?) ear, but was due to a catarrhal affection of the naso-pharynx, which extended to the middle ear or the tympanic cavity through the Eustachian tube; that the impairment of hearing was due not so much to the irritating effect upon or impairment of the integrity of the nerve, as to anchylosis of the ossicles or occlusion of the Eustachian tube. He had examined a number of boiler-makers since then, and had found great difficulty in determining exactly the amount of impairment due to disease or irritation of the auditory nerve, and of the conducting apparatus, for in every one of the cases which he had observed there happened to be naso-pharyngeal and Eustachian catarrh. Indeed, he believed that in many of the cases this catarrhal condition was the principal factor in the deafness. He had also observed that many of these patients, as Dr. Roosa had stated, could hear better with the mouth open; and he had therefore advised them to wear respirators, in order to guard against changes of atmospheric temperature, and at the same time to prevent the entrance of foreign bodies which would tend to keep up a pharyngitis. He had also advised the wearing of ordinary lappets over the ears, instead of introducing cotton, which these men generally packed in too tightly, interfering with the blood-supply, and creating irritation; or, put in too loosely, it allowed of the contact of particles of iron dust, which might lodge in it, with the walls of the auditory canal. In connection with these experiments, he had also observed that among musicians, especially violinists, there was often partial deafness, more frequently in the left ear, and this fact he was inclined to attribute to the custom of holding the violin in proximity to that ear. He had not found that desisting from musical practice and resting the acoustic nerve was followed by any improvement in hearing, and he was disposed to think that it was not alone the internal ear or the auditory nerve that was diseased, but that there was also a simultaneous affection of the middle ear, of the tympanic cavity, and the ossicles, causing some change in the arterial and venous supply of these parts.

Dr. POMEROY said that the question of coming to an exact conclusion as to the nature of the affection present turned upon the evidence of a correct diagnosis. Unlike Dr. Roosa, he said, he was inclined to place great stress upon the observations of Dr. Holt, already referred to. From those observations, and others, there seemed to be no question as to the existence of middle-ear disease in a very large number of cases of boiler-maker's deafness. The appearance of the membrana tympani, he believed, would generally bear us out in that position. It was in many cases peculiarly opaque, showing signs of a long-continued low grade of infiltration with a certain amount of proliferation. Moreover, all these men who were thrown into the category of boiler-maker's deafness were peculiarly exposed to catarrhal influences, and, what was more, catarrh was present in a very large number of cases. Most observers had found that in the earlier stages of boiler-maker's deafness the tuning-fork was heard better in the affected ear than in the other. Dr. Pomeroy believed that the affection began as one of the middle ear and travelled to the labyrinth. It was well known that middle-ear trouble could not continue beyond a certain length of time without the labyrinth becoming involved. He thought that the tuning-fork test must be accepted with great allowance. The statement that if a patient could hear the tuning-fork better by air-conduction than by bone-conduction it was indicative of disease of the labyrinth, he was sure was not true except in a certain number of cases. He believed that in a majority or a large number of instances patients suffering from middle-

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ear disease could hear better in a noise than in the quiet.

Dr. BLAKE agreed with Dr. Roosa that in boiler-maker's deafness the trouble was situated in the internal ear, and, also, that in the majority of cases the middle ear was affected as well with catarrh.

Dr. ANDREWS thought that the locating of the disease in the affections mentioned possessed little value without post-mortem verification, which he believed had not been made. Disease of the middle ear might give all the evidences of disease of the labyrinth, so far as our knowledge at present went, while that part of the hearing apparatus was perfectly normal. He thought that if the drum-membrane were simply pierced, and its margins not destroyed, in the cases mentioned by the author, it would necessarily dispose of the theoretical explanation of hearing better in a noise, offered by Willis.

Dr. ROOSA thanked Drs. Pomeroy and Andrews for their criticisms upon the possibility of diagnosing between disease of the middle and internal ear by means of clinical facts, which he believed he was the first to advocate. With regard to verifying the diagnosis by post-mortem examination, it had often been shown that there was such a thing as disease of the labyrinth, and there were a few cases where a post-mortem examination had been made establishing disease of the labyrinth as previously indicated by the tuning-fork test. Two points had been made in the paper, each of which stood upon evidence distinct from the other. The first was, that there was such a thing as hearing better in a noise by a certain class of patients with ear-trouble. The other related to the differential diagnosis between disease of the middle ear and of the labyrinth or acoustic nerve by the tuning-fork test. He expected these statements to be doubted, and to be even denied, but the point could be settled only by observation and experimentation, which he hoped the paper would have the effect of calling forth. The profession had been disposed to go to one of two extremes in the consideration and treatment of diseases of the ear: at present the tendency was to follow the Germans, —consider every case one of middle-ear disease, and blow it up by Politzer's apparatus. He hoped this paper would have the effect of impressing the profession with the fact that there was such a thing as disease of the acoustic nerve, as cases of incurable ear-trouble, and that the more they were blown up the worse they became; that they should be let alone. With regard to boiler-makers being able to hear the tuning-fork better in the affected ear, he was not aware that other investigators had made and published observations upon this class of patients than Dr. Holt and himself, and he did not know that any such facts had been found. In fact, boiler-makers were affected in both ears. Nor had he observed any larger proportion of cases of middle-ear trouble in this class of people than in those engaged in other occupations.

REVIEWS AND BOOK NOTICES.

THE DISPENSATORY OF THE UNITED STATES OF AMERICA. By DR. GEORGE B. WOOD and DR. FRANKLIN BACHE Fifteenth Edition, rearranged, thoroughly revised, and largely rewritten. With Illustrations. By H. C. WOOD, M.D., JOSEPH P. REMINGTON, PH.G., and SAMUEL P. SADTLER, PH.D., F.C.S. Philadelphia, J. B. Lippincott & Co., 1883. 8vo, pp. 1928. Sheep.

For the first time in the history of the Dispensatory of Drs. Wood and Bache—which has now lived for fifty years and reached its fifteenth edition—has the original plan of the late Dr. George B. Wood been carried out, in having three editors, one for each branch of the subject-matter,—pharmacy, chemistry, and therapeutics. Although the original projectors and authors, in the course of nature, have passed away, their work has been taken up by able hands; and the present edition on every page shows the evidence of careful revision. Much of the matter has been entirely rewritten, and some new features have been added which greatly increase the value of the work to both physician and pharmacist. We need not refer to the peculiar features of the United States Dispensatory that have earned for it a distinctive character in the past,—these by this time are so generally understood as not to require discussion,—but will briefly refer to some of the special points in connection with the present edition, which is essentially a commentary upon the sixth annual revision of the Pharmacopœia of the United States, the authority for such comment having been extended by the Committee of Revision and Publication of the National Convention for the Revision of the Pharmacopœia. In addition to the officinal remedies contained in our National Pharmacopœia, those of the British Pharmacopœia are retained, and also a large number of remedies not at present officinal, but in greater or less use in medicine. Formerly materia medica and preparations were discussed under separate headings, in conformity with the arrangement in the Pharmacopœia; but, as this has been altered in the recent revision, a corresponding change has been required in the Dispensatory: these two groups, therefore, are simply collated alphabetically, and appear under Part I. The unofficinal drugs requiring notice are also alphabetically arranged, and constitute Part II.; while Part III. contains various tables, tests, and test-solutions of the two Pharmacopœias, weights and measures, remarks on prescribing, relative number of drops in similar

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quantities of liquids, formulas and molecular weights, alcoholimetric and specific-gravity tables, thermometric equivalents, and, finally, analyses of various mineral-spring waters, including all American springs of known medicinal value and many well-known European mineral waters.

The fourteenth edition appeared six years ago. Since that time great progress has been made in rational therapeutics: consequently the more important articles in the sections relating to Medical Properties and Uses have required rewriting, rather than revision, by the senior editor, who also corrected those upon Botany and Vegetable Materia Medica. The sections upon Pharmaceutical Chemistry have required important changes under the hands of Prof. Remington; while the Pharmacy of the present edition is almost entirely new. The departments of Theoretical Chemistry and Toxicology have received careful attention from Prof. Sadtler, and have been largely reproduced. So that the present edition of the Dispensatory, taken altogether, may be considered as fairly representing the latest solid achievements of chemical science, as well as the present standing of modern pharmacy and therapeutics, with relation to the articles contained in our National Pharmacopœia.

Among the special changes and improvements in the present edition we notice the introduction of a number of original illustrations more especially representing microscopic sections of drugs, showing their structural characteristics; the indication of the correct pronunciation under each officinal title; the translation of officinal formulæ into parts by weight, and parts by measure in case of fluids; and the numerous changes and additions made necessary in order to make it conform to the text of the Pharmacopœia. In the index are included, for the first time, a large number of German and French synonymes; the index contains over sixteen thousand titles,—nearly five thousand more than in the previous edition. By the introduction of a smaller type in the second part, and economy of space, the work, although considerably enlarged, is still issued in one volume. As we have now the best Pharmacopœia in the world, so the United States Dispensatory, in its present form, may be considered as equally unrivalled in completeness and efficiency.

THE PATHOLOGY AND TREATMENT OF DISEASES OF THE OVARIES. By LAWSON TAIT, F.R.C.S. Edin. and Eng. Fourth Edition, rewritten and greatly enlarged. New York, William Wood & Co., 1883.

The Hastings Essay for 1873 has in this edition grown to fine proportions, showing how truly the author's heart was in the original work, and how successfully time has developed him and it.

As in his earlier writing, the author deplores the misfortune which has hidden from the innocent and inquiring mind of youth the knowledge of the important functions of reproduction, and believes that by simply telling the life-history of a flower,, "teaching a child the functions of the anther, stigma, pollen, ovary, and seed-capsule," letting "him or her see the conjugation of the spirogyra," the child will be armed, after a few hints, "with a knowledge which will do much to prevent mischief, both physical and moral." He would also simplify the terms of science, and use for the organs and functions of man —"a flower of the field"—only botanical terms. Whether this would also tend to morality and virtue is, of course, an unsolved problem; but certainly in these days, when refined and sensitive woman has so frequently a necessity for consulting the male gynæcologist, it might perhaps obviate some modest perplexity if the patient, fully trained in this human botany, could couch her allusions to her parts and symptoms in such flowery and graceful language; or might she not state her case entirely in the language of flowers?

But, meanwhile, the author gives us some excellent chapters on "Anatomy and Physiology of the Ovary" and "Errors of Development in the Ovary and Oviducts." He says, "I know a great deal more than I did three years ago, not only of the pathology but cure of ovarian sufferings," and attributes this increase of knowledge to the influence of Dr. Keith's successes upon the progress of abdominal surgery. He has *seen* more, and consequently knows more. Pathology can be studied far better, he remarks, by looking into the living than into the dead abdomen.

The section upon ovarian diseases is thorough; the cases given are apposite and well told; perhaps the author in treatment deals too exclusively with the operative procedure, but the book is written by a man who believes in operating, and candor must admit that success proves him right.

The chapter on "Ovarian Tumors and Conditions which simulate them" covers the whole field of pathology and diagnosis, but in the latter is especially valuable. The chapter on ovariotomy contains the history of the operation as the author understands it. Throughout the tone is that of one of decided convictions and absolute absence of hesitation in expressing them. Ovariotomy has been many times described in minutest detail, but never more clearly, with more vivid effect, than here. When there is dissent from the methods of others he is outspoken, as in his remarks (page 307) on the ice-cap and Listerism, and in his allusions to Mr. Spencer Wells. He can scarcely mention the clamp with calmness, and, if the clamp had gone and Mr. Baker Brown remained, the mortality of ovariotomy might by this time, we infer, have been nowhere.

Nothing marks the change of a few years

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more than noting the way in which the symptoms of peritonitis are regarded by the author. Distention of the abdomen, bilious vomiting, "rarely give him trouble." For the former he uses the rectal tube, for the latter a saline or mercurial purgative; he does not "lock up the bowels."

The author does not often use the drainage-tube. Where Dr. Keith drains he often purges, and he considers the intestines as perhaps a natural outlet for an overflowed peritoneum.

To beginners the sound advice is given not to engage much in abdominal surgery till they have seen a good deal in the practice of some one else. In the very interesting chapter on "Recent Extensions of Abdominal and Pelvic Surgery" the author narrates his excursions into the border-land of ovariotomy. One cannot but note the tone of confidence with which he writes: "So fearless am I now," and "so splendid have been my results in fields . . . which until three years ago seemed hopelessly enclosed;" and he ventures to lay down a surgical law "that in every case of disease in the abdomen or pelvis in which the health is destroyed or life threatened, and in which the condition is not evidently due to malignant disease, an exploration of the cavity should be made."

The author seems troubled for a name to describe his ovarian operations. Battey's operation, oöphorectomy, spaying, castration, are inapt, inelegant, or bear some hidden sarcasm. Oöphorectomy" he calls "a pedantic invention." Driven by his own experience to the Greek, he would ask for salpingotomy or salpingo-oöphorectomy, or "prosthekotomy," "if the pedantry were not ridiculous." "But I do not," he adds, "propose to attempt any reforms or additions to our clumsy nomenclature." He classes his operations, therefore, according to their nature, under "ovariotomy" and "removal of the uterine appendages." There is therefore to be found here one man who has not bowed the knee to the ever-swelling and ridiculous Baal of technical names which ovariotomy has brought upon us.

Of his own course, the comments made and aspersions cast, he speaks freely, and with the same bold and manly tone which marks all that he writes; and surely a man has a right to be proud and express his pride in his successes when they are so notable and so valuable as those of the author.

E. W. W.

To Cover the Odor of Iodoform.—Dr. Putz, of Graefrath, has tried all the recommended means for covering the odor of iodoform, and confines himself now exclusively to oil of mirbane or nitro-benzol, all the others having failed in his hands. Six drops of nitro-benzol are used for every gram of iodoform.—*Pharm. Zeit., and New Remedies.*

GLEANINGS FROM EXCHANGES.

Tubercular Meningitis successfully treated.—Dr. R. Sauvage reports a case (*New Orleans Med. and Surg. Journal*, April) of a mulatto boy, 14 years old, who presented the symptoms of acute meningitis, the tubercular character of which was rendered extremely probable by the cause of the disease, and the history of antecedent scrofula both in the child and in his mother. The attack came on while the patient was apparently in good health and was very closely applied to his studies at school. There had been no injury to the head. The first symptom noticed was diplopia, which obliged him to close one eye while reading; soon afterwards he complained of lassitude, and had light fever and occasional rigors, which were attributed to excessive study and the influence of malaria. Shortly afterwards he had attacks of severe headache, which became more severe and recurred twice or oftener each day. The paroxysms of pain would last from two to three hours each, and were accompanied by fever, general tremors, and shrieks of pain. The abdomen was arched and retracted, and during the intervals between the spells his hands would grasp the bedding and his face would twitch convulsively. The bowels were constipated. He was irritable and restless, but was not delirious. Vomiting and oscillation of the pupils were prominent symptoms early in the disease. The patient was greatly emaciated. The treatment adopted was blistering the scalp and calves of the legs, and the internal administration of about a quarter grain of iodine daily with ten grains of quinia. Soap enemata were also used as often as necessary. As the patient improved under the treatment, the iodine and quinia were steadily continued for seventy-two days: the fever continued, although less marked, and the headaches now were not so severe, and occurred once or twice a week; cod-liver oil was now added, being used by inunction, and the patient progressed to complete recovery without the slightest impairment of his cerebral functions. Although Trousseau denied the possibility of recovery from tubercular meningitis, Dr. Sauvage believes that cases can be successfully treated if they come under observation sufficiently early.

Sciatica and other Symptoms caused by Affections of the Genito-Urinary Tract.—Dr. T. S. Dabney reports some interesting cases of reflex affections of genito-urinary origin that show the necessity of bearing their relations in mind in the diagnosis of certain affections.

Case I. was a locomotive-engineer, who was crippled by lumbago and sciatica, and had been the rounds of doctors and medicated baths and was fast becoming addicted to

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morphia. He could walk only with the aid of crutches. Dr. Dabney, being consulted, found two urethral strictures, one near the meatus and the other deep-seated. The first one was cut, the second slightly dilated. The patient was at once able to stand up, which he had not done previously for three months, and from that time forward he had no need of crutches. Bougies were passed for ten days, at the expiration of which time the patient again assumed charge of his engine. He had never experienced any difficulty in micturition, and had never had but one attack of gonorrhœa, which dated back twenty years.

Case II. was a two-year old boy, with paraplegia: he could not even crawl. Phimosis, with adherent prepuce, was found to exist; circumcision resulted in complete cure.

Case III. was almost identical, and the result was the same.

Case IV. was a baby which apparently suffered constantly with colic; adherent prepuce was found, and circumcision gave entire relief from the symptoms.

Case V., a boy of three years, with spastic paraplegia of the legs; adherent prepuce, without phimosis, was found. Retraction and oiling led to speedy improvement; ultimate result not known.

Case VI. was a female child, five years old, that apparently had cramps during micturition. Adhesion of the labia minora was found, and a cure followed their separation.

Case VII., a colored boy, about three years old, had presented symptoms of a grave character for about three months. He became morose and irritable; he gradually lost the use of words, until he could only say "yes" and "no." He had a peculiar sidelong gait, never putting one foot in front of another. The patient was bordering on a state of idiocy. Examination showed phimosis and adherent prepuce, with much retained secretion. Circumcision was followed by gradual restoration of faculties, and power of walking. He is now as bright as boys usually are of his age.—*New Orleans Medical and Surgical Journal*, April, 1883.

HERNIA REDUCED BY ELECTRICITY.—Dr. Suprunenko mentions an experience of interest in the *Wratsch* (No. 17, 1882). A right inguinal hernia, strangulated for three hours, had resisted half an hour's taxis. A moderately strong induction current was then tried, the positive electrode being pressed against the tumor, while the negative was applied first against the lumbar vertebræ, afterwards over the umbilicus. The hernia at once began to diminish, and in less than two minutes disappeared entirely. Another case is given in the same journal (No. 40, 1882). An old man of eighty had suffered from a strangulated hernia for twelve hours. Persistent taxis had altogether failed, though Dr. Pergamin kept it up for over two hours. The induction current was then used for fifteen minutes, the pole being applied to various parts of the tumor, but this also failed. The current being still maintained, he again attempted manipulation, and in two minutes the bowel returned into the abdomen with a gurgling noise.—*Practitioner.*

CONVALLARIA COMPARED WITH DIGITALIS.—From physiological experiment, Dr. Isaac Ott concludes that the lily of the valley has a decided cardiac action, but that as compared with digitalis the slowing of the heart is due to a different cause: with digitalis it is due to cardio-inhibitory excitation, with convallaria some other part of the heart is the agent. Digitalis, as a rule, does not primarily accelerate the heart; convallaria does. After section of the spinal cord, digitalis is powerless to increase arterial tension, but convallaria does. The action on the heart is probably upon its muscular structure; the rise in arterial tension is due to stimulation of other vaso-motor apparatus than the main monarchical vaso-motor centre. The drug causes clonic spasms. Dr. Ott advises caution in its employment, that it be not pushed to any great extent.—*Archives of Medicine*, February.

AN INQUIRY INTO THE CAUSES OF THE INCREASE OF CANCER.—By Hugh P. Dunn, F.R.C.S. At the end of a long and elaborate thesis on this question, Mr. Dunn concludes —1. That, in the face of incontrovertible facts, cancer is increasing in England. 2. That this increase is due (*a*) to the success attending the legislative measures and other means for the preservation of the infant population, by which a large proportion of persons reach adult age, and the general healthiness of the community is increased; (*b*) to the greater prominence which, in the present day, prevails, of the most predisposing causes of the disease,—such as the fecundity of women, the prevalence of high nervous tension, the existence of possibly greater general luxury in the mode of living. 3. That the immunity apparently demonstrated by the records as present in certain counties of England and Wales is presumably, as we have attempted to show, not due to any real declination of the disease, but rather to such causes as can be explained by special local predisposition to other diseases, to which a large proportion of the adult population succumb. 4. That, in consequence of this, if each district of England and Wales were equally healthy, each would probably exhibit a high cancer-mortality. 5. That the geographical area of which England and Wales is composed is insufficient to account directly for interruption in the distribution of cancer as met with in this island.—*British Medical Journal.*

HEMORRHAGE FROM THE LACHRYMAL DUCT DURING EPISTAXIS.—Mr. D. Hoadley Gabb, M.R.C.S., of Hastings, describes the following remarkable case: "Mr. S., aged

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50. with mitral disease and albuminuria, sat out one of our recent sunny days, and caught a chill, which culminated in an attack of bronchitis and a relaxed state of the fauces and uvula, producing severe spasmodic cough. During one of these paroxysms, epistaxis, from the right nostril especially, came on rather profusely, and I was sent for. There was no difficulty in arresting it by plugging the anterior nares with dry lint. In two or three hours, after a severe cough, the hemorrhage returned, and a messenger was sent for me, saying the bleeding had come back, and was running out of his nose and eyes; and so I found that the blood had welled up through the right lachrymal duct, and was suffusing his eye, so that he was constantly obliged to wipe it, and the handkerchief was pretty well stained with the blood, and the discharge only ceased when the nose left off. I have never met with the phenomenon before, neither have others to whom I have mentioned it; and so, I think, perhaps it is worth recording."—*British Medical Journal.*

MISCELLANY.

INSANITY IN THE UNITED STATES.—The tenth census gives some interesting and suggestive facts relative to the increase of insanity in this country. The total number of insane in 1870 was estimated at 37,432, as against 91,997 in 1880,—an apparent increase of over 100 per cent. This gives a ratio of one insane person to every 543 of the population,—a much larger estimate than many observers will be willing to admit.

PROFESSOR LASÈGUE died in Paris April 20, of diabetic consumption, in the sixty-eighth year of his age. He was editor of the *Archives de Médecine* for thirty years; but it is in connection with mental diseases that he is best known. He was considered the first of the French alienists.

WE are pleased to note an addition to the clinical facilities of Philadelphia, in a Hospital for Skin Diseases, at 923 Locust Street. It offers accommodations for twenty patients, and is said to be very well furnished with bathing-facilities.

FREQUENT micturition, where no special cause appears, is best treated by passing a weak galvanic current from the lumbar region to the region of the bladder.—*British Medical Journal.*

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY FROM APRIL 28 TO MAY 12, 1883.

BAILY, JOSEPH C., MAJOR AND SURGEON.—To be relieved from duty in the Department of California, and assigned to duty in the Department of Texas. Paragraph 21, S. O. 102, A. G. O., May 3, 1883.

BILLINGS, JOHN S., MAJOR AND SURGEON.—By direction of the Secretary of War, to represent the Medical Department of the Army at the annual meeting of the American Medical Association, to be held at Cleveland, Ohio, June 5, 1883. Paragraph 10, S. O. 105, A. G. O., May 7, 1883.

FORWOOD, WM. H., MAJOR AND SURGEON.—By direction of the Secretary of War, to represent the Medical Department of the Army at the annual meeting of the American Medical Association, to be held at Cleveland, Ohio, June 5, 1883. Paragraph 10, S. O. 105, A. G. O., May 7, 1883.

SMITH, JOS. R., MAJOR AND SURGEON.—By direction of the Secretary of War, to represent the Medical Department of the Army at the annual meeting of the American Medical Association, to be held at Cleveland, Ohio, June 5, 1883. Paragraph 10, S. O. 105, A. G. O., May 7, 1883.

TILTON, HENRY R., MAJOR AND SURGEON.—To be relieved from duty in the Department of the Missouri, and assigned to duty in the Department of the East. Paragraph 13, S. O. 102, A. G. O., May 3, 1883.

BARTHOLF, JOHN H., CAPTAIN AND ASSISTANT-SURGEON.—The extension of leave of absence granted April 3, 1883, further extended four months. Paragraph 8, S. O. 105, A. G. O., May 7, 1883.

BYRNE, CHAS. B., CAPTAIN AND ASSISTANT-SURGEON.—To be relieved from duty in the Department of the South, and assigned to duty in the Department of the Missouri. Paragraph 12, S. O. 102, A. G. O, May 3, 1883.

CRAMPTON, LOUIS W., CAPTAIN AND ASSISTANT-SURGEON.—Now awaiting orders, to proceed without delay to Fort Wayne, Michigan, and report to the commanding officer for duty at that post. Paragraph 2, S. O. 73, Department of the East, April 30, 1883.

PERLEY, HARRY O., CAPTAIN AND ASSISTANT-SURGEON.—To be relieved in the Department of the East, and assigned to duty in the Department of Dakota. Paragraph 14, S. O. 102, A. G. O., May 3, 1883.

SPENCER, WM. G., CAPTAIN AND ASSISTANT-SURGEON.—Now awaiting orders, assigned to duty in the Department of the East. Paragraph 12, S. O. 102, A. G. O., May 3, 1883.

WORTHINGTON, JAS. C., CAPTAIN AND ASSISTANT-SURGEON.—To be relieved from duty in the Department of the East, and assigned to duty in the Department of the Missouri. Paragraph 14, S. O. 102, A. G. O., May 3, 1883.

BIART, VICTOR, FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—To be relieved from duty in the Department of the Missouri, and assigned to duty in the Department of Dakota. Paragraph 13, S. O. 102, A. G. O., May 3, 1883.

MACAULEY, CARTER N. B, FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—To be relieved from duty in the Department of the East, and assigned to duty in the Department of Dakota. Paragraph 12, S. O. 102, A. G. O., May 3, 1883.

STRONG, NORTON, FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Upon expiration of leave of absence, to be assigned to duty at Fort Thornburgh, Utah. Paragraph 2, S. O. 42, Department of the Platte, April 25, 1883.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING THE WEEK ENDING MAY 5, 1883.

P. A. Surgeon H. L. LAW detached from the Navy-Yard, League Island, Pennsylvania, on 10th inst., and ordered to the "Yantic."

P. A. Surgeon H. P. HARVEY detached from the "Yantic" on reporting of relief, and ordered to Naval Hospital, Chelsea, Massachusetts.

Surgeon WM. J. SIMON ordered as member of a board at Naval Academy.

P. A. Surgeon W. A. MCCLURG detached from the Naval Academy on the 15th inst., and ordered to the "Dale."

Assistant-Surgeon OLIVER C. DIEHL detached from the Naval Academy and ordered to the "Constellation."

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING THE WEEK ENDING MAY 12, 1883.

Surgeon F. M. DEARBORNE granted six months' sick-leave.

P. A. Surgeon S. A. BROWN'S leave extended six months.

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PHILADELPHIA, JUNE 2, 1883.

ORIGINAL LECTURES.

DISEASES OF THE KIDNEYS.

A Series of Lectures delivered before the Medical Class of the University of Pennsylvania

BY WILLIAM PEPPER, M.D., LL.D.,

Provost and Professor of Clinical Medicine in the University of Pennsylvania.

Reported by WILLIAM H. MORRISON, M.D.

II.

ALBUMEN—ITS TESTS AND SIGNIFICANCE—TESTS FOR SUGAR—MICROSCOPICAL EXAMINATION—CRYSTALLINE DEPOSITS—TUBE-CASTS.

GENTLEMEN,—At the last lecture I spoke to you of the proper modes of examining the urine. I had spoken of the presence of bile, and was about to refer to other abnormal ingredients, when the hour closed. There are two of these, the presence or absence of which should be determined in every case. These are albumen and sugar, the former especially. As so many specimens of urine contain albumen, and as there is nothing about the naked-eye appearance to indicate its presence, it is not pardonable, in any case whatsoever, to fail to test the urine for albumen. As I have so frequently said to you in connection with the examination of patients, I am sure that you will never arrive at any degree of accuracy in your diagnosis unless you adopt the inflexible rule of examining the urine of every individual who consults you, no matter what may be the symptoms present. If you wait for the patient to complain of some symptom which directs your attention to the kidneys, you will overlook the presence of albumen in at least one-half of all the cases where it exists. The importance of this examination is every day more strongly impressed upon me. I am certain that not a week—I might almost say, not a day—passes wherein I do not come across some case which has been treated for this, that, or the other condition, in which the diagnosis would have been rendered perfectly clear by examining the urine for albumen. I say, therefore, that it is our bounden duty to examine the urine in each and every case, no matter what may be the symptoms present.

There are a great many tests for albumen in the urine, but I think that it is not worth while to know more than two or three. It is best to be familiar with a few simple methods, and then, if you meet with obscurity, you can look in your books for other methods by which to check the results. You are all acquainted with the common test, which consists in boiling the urine, by which any albumen that is present will, under ordinary circumstances, be precipitated. In using this test you pour into a clean test-tube a small quantity of urine, filling the tube about one inch from the bottom. I test this sample of urine in this way, and you observe that a faint opalescence is produced on boiling. You must not expect in every case of albuminuria to find a considerable deposit. A slight deposit is as apt to be indicative of grave disease as a heavy coagulum. No one is likely to overlook a large amount of albumen, but small quantities are constantly overlooked.

You are, however, aware that a precipitate formed by boiling urine is not of necessity albumen. It may be phosphates; and, in order to settle this question, a little acid (commonly nitric) is to be added to the boiled urine. If the precipitate consists of phosphates, it will be re-dissolved, and the urine will be rendered clear; if the precipitate is albumen, the acid will have no effect upon it. In this specimen the precipitate immediately disappears on the addition of a drop of nitric acid. It was, therefore, due to phosphates. Hence you are never to conclude from boiling alone that albumen is present, but the test is to be checked by the use of acid. Again, in some cases albumen may be present and not be precipitated by boiling; the urine remains perfectly clear, and the albumen will not be precipitated until an acid is added. This is sometimes dependent on an alkaline state of the urine, and sometimes it seems to be due to a modification of the albumen itself.

You will observe, therefore, that the boiling test is subject to two uncertainties. In the first place, it may produce a cloudiness even if albumen is absent, this cloud being due to phosphates; in the second place, it may cause no precipitate, although albumen is present. Consequently, in either case, you will not be satisfied until you have added an acid.

I can further illustrate this by another specimen, which has become turbid. Be-

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fore applying the tests for albumen, you should determine with your eye the exact amount of turbidity, in order that you may judge whether or not the urine is made more turbid by boiling. It is often difficult to decide whether the turbidity is or is not increased, so that in doubtful cases you will first filter the urine. Boiling of this turbid urine gives no indication of the presence of albumen, but when I acidulate it while boiling it becomes opaque at once from a precipitation of albumen.

Both of these specimens were taken haphazard, but they illustrate just what I have been saying. You note that this urine, which has become turbid from long standing, did not throw down phosphates on boiling, and its alkalinity is therefore probably due to the presence of ammonia.

This leads us to recognize the desirability of having another test for albumen in the urine. We have a second one in the use of nitric acid to unboiled urine. It is applied in the following manner: a small quantity of urine is placed in a test-tube, held slanting, and a little nitric acid is allowed to run down the side of the tube so as to gravitate to the dependent angle. At the line where the acid joins the urine, there will, if albumen be present, be an opaque ring formed. In this specimen the ring is as thick as a nickel penny. This test is very delicate, and, as it is easily applied, should always be employed to check the results obtained by boiling and nitric acid. There are a great many other tests for albumen; but our safety does not lie in the number of tests we employ, but in the accuracy with which we apply the few with which we are familiar.

The significance of albumen in the urine is one of the most difficult problems in practical medicine. It is present in so many different conditions where the kidneys are and where the kidneys are not diseased that it would require much more time than we have at our disposal to discuss them all.

We should, in the first place, determine whether albumen is present in large or small amounts; in the second place, whether it is present constantly, or present transiently; and, in the third place, whether or not there are associated with it any other evidences of organic disease of the kidneys.

In deciding as to the amount of albumen, the common method is to take a slender test-tube, place in it a certain quantity of urine, boil, add nitric acid, and allow the precipitate to settle for twelve or twenty-four hours. We then measure the height of the column of urine and that of the coagulum, and estimate what proportion of the urine is occupied by the albumen. In a highly albuminous urine the precipitate of albumen will occupy twenty-five per cent. of the bulk of urine. It may even be more than fifty per cent. In such a case, after boiling and adding nitric acid, the test-tube may be inverted without its contents escaping. A *highly albuminous* urine, we may say, contains from twenty per cent. to twenty-five per cent. and upwards of albumen. A *decidedly albuminous* urine contains about ten per cent. *Slightly albuminous* urine contains from two to five per cent. A *mere trace* of albumen is found as a delicate film at the bottom of the tube. These are the terms which are employed to describe the relative amounts of albumen. You will, of course, understand that these proportions do not represent the actual amounts of albumen. If you desire the exact amounts, it is necessary to filter the urine from which the albumen has been precipitated, and carefully dry and weigh the residue. You will then be surprised to find how small a proportion of albumen is really present even in highly albuminous urine. One-half per cent. would be a large amount, one per cent. would be very large, and two per cent. would be unusually large. The great part of the bulk of the moist precipitate is due to the urine which is retained in the meshes of the coagulum, and the water which enters into the composition of albumen.

The next question is, whether the albumen is transient or permanent. There are border-line cases, where the patient has no organic disease of the kidney, where there is not even any serious functional disturbance of the kidney, and yet where the kidneys are unable to separate the amount of albumen which enters from the blood after a hearty meal of albuminoids, or after a great deal of muscular exercise. Just before coming here I saw, in consultation, a case where exactly this question came up. A young gentleman had been taking a tour in Switzerland. He had been travelling a great deal on horseback, and, where he could not do this, walking. After a time he began to suffer with vague pains in the limbs. He applied to a physician, who on examining the urine found albumen. I examined the urine, but found no albumen.

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The physician who has charge of the case found it in two out of five samples examined. Here is a case where the urine is occasionally albuminous. In order to determine the significance of its presence, we have ordered this patient to furnish specimens collected after rest and after exercise, and at different periods of the day. If necessary, the diet will be changed and the effect of the change noted. In this case, as in others you will meet with, the occasional presence of a small amount of albumen is possibly compatible with health. I warn you not to consider that the presence of a small amount of albumen is conclusive evidence of serious organic disease or even of severe congestive disturbance of the kidney. If the amount of albumen be small, and if on microscopical examination no evidence of structural change is found, you should ask for other specimens, taken at different periods of the day, in order that by their examination you may check the results of the previous test.

I must allude here to the familiar fact that when the urine contains pus there will always be a demonstrable amount of albumen in the secretion. By carefully noting the amount of pus present, and the proportion of albumen, a tolerably correct estimate can be formed as to whether the albumen can be attributed solely to the pus present, or whether it is necessary to assume that, in addition to that which comes from this source, there is albuminuria from some renal disorder.

Persistent albuminuria is a very significant condition,—significant of renal congestion or organic change. Transient albuminuria is much less likely to be so. You must, however, remember that in interstitial nephritis—*i.e.*, chronic contracted kidney—albumen is occasionally absent. In the other forms of organic disease (Bright's disease) albuminuria is persistent.

Lastly, we are to observe whether or not the presence of albumen is associated with other evidences of organic change in the kidney, as shown by microscopical examination. In no case where there is even the slightest trace of albumen should a careful microscopical examination be neglected. When I come to speak of the congestive conditions of the kidneys and of functional albuminuria from various disturbed conditions of health, I shall point out to you that, as a rule, there are to be found in these affections no tube-casts and not even degenerated epithelium; while, on the other hand, if the albuminuria is dependent on organic disease of the kidney, we do find, as a part of the sediment, renal epithelium and tube-casts of various kinds. The presence of these with albuminuria constitutes a positive proof of structural change in the kidney. Hence, no matter how small the proportion of albumen, no matter whether it be transient or permanent, a microscopical examination of the sediment is in every case obligatory. No one is fit to practise physic to-day who does not know how to test the urine chemically and who has not a microscope in his office and is competent to examine the sediment of the urine. A man who undertakes to treat any case without these appliances is as criminal as the captain who puts to sea without lifeboats and life-preservers. By a neglect of this matter you fail to do your duty, and may forfeit the lives of those who, in blind confidence, put themselves under your care. The vast majority of physicians in the United States to-day are incompetent to test the urine and are ignorant of the use of the microscope. Not a week passes without my seeing fatal results from such ignorance.

The next abnormal ingredient in the urine to which I shall ask attention is sugar. Sugar in the urine is frequently met with, but is not so common as albumen. The presence of albumen in the urine is not indicated by any change in the specific gravity. This may vary between 1.005 and 1.035; but when sugar is present we may be led to suspect its presence from an unusually high specific gravity. This, however, is not constant. Urine having a specific gravity of 1.010 or 1.020 may be saccharine.

The presence of sugar is recognized by a number of tests, of which I shall mention only one. If you wish more, you can obtain them from your books. One good test is sufficient. As I stated last week, saccharine urine is often of light color, but this is not at all constant. The test for sugar which I prefer is Fehling's test solution, which depends on the principle that if to a hot alkaline solution of sulphate of copper a saccharine liquid be added, the deoxidizing power of sugar will cause a precipitate of the fawn-colored suboxide of copper. I shall apply this test to the urine in which we found phosphates.

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It is not often that you see urine as pale as this. It is almost as clear as water; but it has a specific gravity of 1.030. I first boil a small quantity of freshly-prepared Fehling's solution. It is desirable to add the suspected urine in small amounts, since we can form some estimate of the amount of sugar from noting the number of drops necessary to produce a reaction. In this case one drop produces a heavy deposit of the suboxide of copper. The test with subnitrate of bismuth is valuable as a check upon this, and the fermentation test is useful in cases of doubt. It is so easy to test the urine for sugar at the same time that you are examining it for albumen that I think it is well for you to accustom yourselves to making this examination in every case. You should establish a regular routine in these examinations: get an idea of the amount, note the color, take the specific gravity, observe the reaction, and apply the tests for albumen and for sugar. All this is done in a short time.

You then proceed to note that which is of equal importance,—*i.e.*, the microscopical examination of the sediment. For this purpose some urine is poured into a test-tube, or, better, into a conical glass, and allowed to stand ten, twelve, or twenty-four hours. If it is kept for a long time, it should be put in a cool place to prevent decomposition. The mode of examining is very simple, but it must be done with care. A thoroughly clean slide and cover are to be prepared; then, with a clean pipette, a small amount of the sediment is to be obtained. The excess of liquid is to be wiped from the sides of the pipette, and a drop is to be placed on the slide. The cover is then applied so as to exclude all bubbles of air, and any excess of urine is carefully absorbed. One well-prepared slide will usually give all the important characters of a urinary sediment. The substances for which we look are, in the first place, crystalline deposits. I have not time to show you drawings of the different forms, but you can readily obtain them. There are three varieties that we especially look for. These are phosphates, uric acid and urates, and oxalate of lime. All these have a practical bearing. In the second place there are other abnormal deposits which we should study, such as spermatozoa, mucus, leucocytes, blood, epithelium, tube-casts, and various forms of bacteria.

I wish to call your attention to the importance of becoming familiar with the appearance of mucin shreds and mucin cylinders, for they will often confuse you, and may be mistaken for tube-casts. A careful study of the characters of true tube-casts and of the stringy mucus which forms in prostatic irritation and vesical trouble will soon enable you to distinguish one from the other. Mucin shreds are of no practical importance, but tube-casts are of the gravest importance, and their recognition is therefore very desirable. Next in importance come pus- and blood-corpuscles. Lastly, we have tube-casts of various kinds. Tube-casts are divided into hyaline, or clear glassy-like casts; epithelial casts, more or less composed of epithelial cells, which may be embedded in hyaline matter, or apparently the entire cast may be made up of epithelial cells; granular casts, in which the epithelium composing the cast has broken down into a granular débris, or where the hyaline matter has become granular; and fatty casts, in which a large quantity of fat granules and globules are observed.

These are the deposits which are to be looked for in the sediment, and a very little study will enable you to recognize their presence with the greatest ease. In your notes of cases it is desirable to accustom yourself to putting down all those things which are seen, so that you will understand that the failure to note a certain thing implies its absence.

In cases where you have found albumen in the urine you should examine the urine under the microscope until you find tube-casts, or until you have examined ten slides, before concluding that no tube-casts are present.

Uric Acid and Urates.—Urine of a high specific gravity, throwing down a large deposit of urates and uric acid, is an evidence of the lithic or uric acid diathesis. This diathesis is connected with acid dyspepsia, and is usually one of the expressions of gout; in fact, it lies at the root of gout. It is a result of the inability on the part of the stomach, liver, and kidneys to elaborate certain elements of the food into their proper chemical form, and the system is therefore surcharged with these imperfectly-elaborated compounds, uric acid, urates, etc. This condition tends to the production of stone in the bladder, and is often associated with a tendency to the formation of

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biliary calculi, as the bile is apt to be unusually thick and loaded with insoluble matters. It is also closely associated with the manifestations of rheumatism and gout, but not necessarily with explosive attacks of acute inflammation of the toe-joint, but with the great group of irregular manifestations of suppressed, latent, or irregular gout, which are of very common occurrence in this country, although fully-developed gouty paroxysms are comparatively rare. You will overlook the nature of many cases and fail in their treatment if you do not connect symptoms of dyspepsia, of deranged hepatic action, of vague rheumatic or neuralgic pains, or of nervous troubles, with urine of a high specific gravity and loaded with urate and uric acid and dependent upon the existence of this uric acid diathesis.

Such cases require for their treatment a carefully-regulated and digestible diet. As in every other constitutional condition, the individual peculiarities of the patient are to be studied far more than the individual disease. Some say that the best results are obtained from the use of a non-nitrogenous diet, while others claim that a nitrogenous diet is the best. The truth is, that the condition of the digestion and the effect of the diet on the urine and the symptoms in individual cases constitute the guide to the proper diet. The dietetic treatment of such cases is *the* treatment. The utmost vigor of the secreting organs should be maintained and prompted, and the conversion of effete matters into easily-excreted products should be facilitated by correct hygiene and by suitable exercise. The medicinal treatment consists in the use of alkaline mineral waters, to increase the secretions of the liver and intestinal canal, and of bitter tonics and the mineral acids, to improve the condition of the digestion.

The constant presence of oxalate of lime in considerable amount in the urine denotes a condition called oxaluria, with which dyspepsia and nervous depression are often associated. This association has been assumed in many works to be more constant than it really is, and oxaluria has come to be regarded as almost synonymous with hypochondriasis, a disposition to melancholy, and with morbid depression of spirits and perversion of character. This has been carried so far that the detection of these crystals in the urine has been held to be a sufficient plea for criminal acts on the part of the patient. Oxalate of lime is present in the urine as a normal ingredient in small amounts; the amount becomes larger after the ingestion of certain articles of food, and especially after the use of certain vegetables. These crystals are very irritating to the urinary passages. When oxalate of lime is present in excess in the urine, it indicates and is often associated with marked indigestion, and with that type of irregular symptoms which I have before described as a part of the symptoms of lithiasis. I hold that this is a modification of the uric acid diathesis, and its treatment embraces the same hygienic, dietetic, and medicinal principles that have already been referred to in speaking of the latter.

Phosphatic Salts.—These are very often deposited in the urine. Phosphuria or phosphoric acid diathesis are the terms used to indicate the state of the system in which there is an excess of phosphates formed and discharged from the kidneys. It has been commonly held that, as the derivatives of phosphorus enter in a large proportion into the structure of the nervous system, there is some special connection between nervous exhaustion and prostration and the phosphoric acid diathesis, and that the presence in the urine of a large amount of phosphates is an indication that the nervous tissue is disintegrating rapidly. As with all chemical theories, when you come to apply it to such a complicated subject as that of a living body, this theory is exceedingly partial in its truth. In softening of the brain, in nervous prostration, and after protracted mental exhaustion or strain, the urine does become charged with phosphates; but it is also true that excess of phosphates is found in many other diseases, and is not found in many cases of grave nervous disorder. There cannot be said to be any constant relation between the two; but I think if phosphuria is found as a constant condition we should search with more care for any cause of nerve-strain, irritation, or exhaustion. Particularly would I connect this condition with sexual excesses. It is often associated with atonic dyspepsia,—not with acid dyspepsia, as is the uric acid diathesis. It is also often associated with catarrhal states of the mucous membranes, particularly with catarrh of the genito-urinary mucous membrane, and the phosphates enter into the formation of many calculi.

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This diathesis is to be treated by attention to hygiene and diet and by remedies for the relief of the nervous or atonic dyspepsia. Nutrients and tonics, such as iron, arsenic, mineral acids, and bitter tonics, are of service in these cases.

TRANSLATIONS.

A CASE OF SUBACUTE SARCOMATOUS PERITONITIS.—Dr. E. Gaucher records (*La France Médicale*, No 37) a very rare if not unique case of primary diffuse sarcomatous disease of the entire peritoneum, with autopsy. The patient was a man, 27 years of age, who for two months previous to applying for treatment had suffered with a profuse diarrhœa; he had noticed that occasionally the discharges contained blood. He emaciated greatly and became quite weak, so that he was obliged to discontinue work. About a week before coming under observation, he observed that his abdomen began to swell quite rapidly, and a few days later his legs became œdematous. The abdomen was very much swollen; it was dense and resisting, but gave a tympanitic note on percussion at first, which afterwards yielded to dulness as the effusion became more abundant; there was considerable pain complained of, and abdominal tenderness was everywhere present. A few days later the effusion was so abundant as to embarrass respiration, and finally threatened suffocation. By aspiration 800 cc. (27 fluidounces) of a bloody fluid were removed, with great relief to the patient, who nevertheless perished three hours later.

At the autopsy, the peritoneum, both visceral and parietal, and throughout its entire extent, was literally covered by red, proliferative, raspberry-like granulations, apparently cancerous, but there was no aggregation, and no tumor properly speaking, nor was there found any malignant disease of the viscera nor enlarged lymphatics. The lungs were perfectly healthy. Under the microscope the granulations were found to be made up entirely of embryoplastic ganglia (or embryonic tissue) pressed together, and supported here and there by delicate trabeculæ; the spaces contained a large number of vessels of recent formation. The growth was therefore declared to be globo-cellular sarcoma. Other cases of sarcoma of the peritoneum, even of primary sarcoma, have been reported, but the neoplasm in all constituted masses more or less circumscribed and limited, forming tumors; they also presented during life the chronic march of cancer; but this variety of diffuse primary sarcoma of the peritoneum, involving the entire extent of this structure, in its clinical history presented many analogies with tubercular peritonitis, so that in such cases an error in diagnosis seems almost inevitable, at least until aspiration reveals a bloody ascites which under the microscope contains blood-elements, with possibly some of the fragments of the growth.

BULBAR MYELITIS.—Two cases of acute myelitis limited to the medulla oblongata are reported by P. Etter (*Schweizer Aerztliches Centralblatt*, Nos. 23 and 24, 1882). One recovered; the other died, and the diagnosis was confirmed by autopsy. The first patient was a girl, 27 years old, who was taken with strabismus, and in a few days with paralysis of the oculo-motorius, abducens, and trochlearis on both sides, with weakness of facials and of both accessorii, and inability to swallow. There was increasing weakness of vision, not improved by glasses, although the field of vision was normal, and the ophthalmoscopic examination negative. The extremities and the trigeminus were not affected. After two weeks the symptoms began to improve, and a month later there only remained a slight failure of accommodation, which subsequently disappeared.

The second case was a boy, 15 years of age. The first symptoms were headache, chills, and vomiting, difficulty in swallowing, weakness of facial muscles and in the tongue. Later there was paralysis of the soft palate, and on the eighth day, besides paralysis of the left abducens, there was loss of power in the glottis and in the muscles of the neck and throat; finally swallowing became impossible, and artificial feeding was resorted to. The patient died on the tenth day, from pneumonia. The extremities to the last remained unaffected. At the autopsy numerous foci were found in the medulla oblongata, affecting the nuclei of the roots of the nerves that during life were paralyzed.—*Centralblatt für Med. Wissensch.*, No. 13.

THE death of M. Martin-Damourette, the well-known French therapeutist, is announced. He was 61 years old.

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AMERICAN SURGICAL ASSOCIATION.

A LARGE and successful meeting, being the Fourth Annual Convention of the American Surgical Association, was held at Cincinnati, May 31 and June 1 and 2, Prof. S. D. Gross, of Philadelphia, President of the Association, occupying the chair.

The first day's session began at ten o'clock, the President reading a brief annual address, congratulating the Association upon its rapid growth and present prosperity, upon the fact that there had been no losses by death during the year, and recommending the adoption of an amendment to the By-laws increasing the limit of membership from one hundred to one hundred and fifty, and also enlarging the Council from four members to seven.

Dr. P. S. Conner, Chairman of the Committee on Reception, delivered a brief address of welcome, and invited the Fellows to attend the annual banquet at the Gibson House, at 8.30 P.M., June 1, at the close of the second day's session.

The Secretary, Dr. J. R. Weist, read the minutes of the previous meeting, at Philadelphia, which were adopted.

The President asked that the Council act at once upon nominations for Fellowship, in order that the new members might take part in the meetings. It was announced that only eleven vacancies existed. In the absence of Dr. Cole, one of the members of the Council, Dr. Moore, of Rochester, was appointed temporarily to act in his place.

The Secretary read a letter from the venerable Prof. Willard Parker, of New York, acknowledging the honor conferred upon him by the Association in electing him to a Fellowship, which he accepted with pleasure, expressing the hope that the Association might soon cease to be migratory and have a fixed place of meeting.

The Treasurer, Dr. John H. Packard, presented his report, showing a balance on hand of $2270.31, and asked that an auditing committee be appointed. The President named Drs. Mears and Benham as auditors of the accounts.

Dr. Chas. B. Nancrede read a paper in reply to the query, "*Have we any Therapeutic Means, as proven by Experiment, which directly affect the Local Processes of Inflammation?*" From a series of experiments of the local vascular and blood changes following the application of irritants to the web of a frog's foot, and the effects upon this traumatic inflammation of the abstraction of blood, he was able to arrive at positive conclusions, and to answer the question in the affirmative,—that local bleeding offers advantages in the treatment of local inflammations unequalled by any magistral remedy. He formulated his conclusions as follows:

"1. During the stage of dilated arteries, with increased rapidity of the current, but little danger of capillary changes, with exudation, need be apprehended, and here perhaps ergot, certainly arterial sedatives, do good, either directly or indirectly, without blood-letting, by reducing the size of the arterioles and the rapidity of the current, thus allowing the veins of the obstructed area time to empty themselves, even of an unaccustomed amount of blood. Thus, if vascular pressure changes have taken place, the vessels have an opportunity to return to the norm.

"2. After stasis has occurred, or is occurring, weakening of the heart's action and a diminished volume of the current, bleeding can do nothing but harm to the inflamed area, although, for the reasons given, it *may* prevent extension of the inflammation in the circumjacent parts, which are merely in the earliest stages of congestion.

"3. The results to be sought, and which are secured by local blood-letting, are removal of the blood on the venous side, so that the vessels cannot only empty themselves, but a certain amount of *vis a fronte—i.e.*, aspiration—is invoked: this secondarily results in not only a temporary return to the norm on the arterial side, but an increased rapidity and—here is an important point—lessened force of the circulation. The acceleration of rate, without weakened force of the circulation, would further damage the vessels; instead of which the increased rate of the current merely serves to sweep out the accumulated red blood-cells, the cause of the excess of oxygen and the consequent cell-infiltration. The vehement current also induces a rapid resorption of the effused liquor sanguinis, at once the stimulator to growth and the food of the cells. The latter advantage is not founded on theory alone, for it is a matter of common observation that the mere amount of blood abstracted produces no sensible effects on an inflamed breast, for instance, but in a few hours the skin, if carefully examined, has become wrinkled and the whole organ shrunken. This effect is secondary to the loss of blood, and chiefly results from the absorption of the inflammatory exudate.

"4. Arterial sedatives in the latter stages are usually inadmissible, except as succedanea to blood-letting, as far as the focus of inflammation is concerned. The surrounding parts, which are merely congested, may be benefited by their exhibition. *After* blood-letting they act favorably, because, when the stasis has been overcome, they lessen intra-vascular pressure, and thus permit the blood-vessels to recover their normal condition. They also alleviate pain by lessening the bulk of blood in the part; *i.e.*, they relieve nerve-pressure."

As before intimated, this essay was merely little more than a few notes on the effects of local blood-letting: it does not pretend to

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cover the extended field of either the local or general treatment of inflammation. He hoped that it might stimulate discussion upon a useful though neglected remedy.

In the discussion of Dr. Nancrede's paper his investigations were referred to in the highest terms of commendation, as affording a scientific basis for the use of bleeding in organic, especially traumatic, inflammations, and affording more precise indications for the employment of this powerful therapeutic agent. Remarks were made by the President, Prof. Gross, and Drs. Campbell, of Georgia, Moore, of Rochester, Post, of New York, Kinloch, of Charleston, South Carolina, Gunn, of Chicago, Briggs, of Nashville, Tennessee, Gregory, of St. Louis, and Nancrede in closing the discussion.

Dr. B. A. Watson, of Jersey City, read a paper on "*Lister's System of Aseptic Wound-Treatment*, versus *its Modifications*."

Dr. Watson referred to Redi's experiments in 1668, which first demonstrated the truth that maggots are not spontaneously generated in wounds. It was he who formulated the remarkable hypothesis, "no life without antecedent life." The experimental studies of Vallisnieri, Swammerdam, Réaumur, Schroeder, Dusch, Pasteur, Beale, Tyndall, and others have finally banished the idea of spontaneous development, and have shown that fermentation and putrefaction *can only be produced* by living germs. Furthermore, they have also pointed out the conditions required for their growth and multiplication, the various methods by which they are carried, and the means by which their destruction may be accomplished. Connected with this are the observations made by surgeons with regard to the effects of air upon wounds. Galen declared that the action of air is often injurious, and even dangerous, to wounds, on account of the heterogeneous substances which it contains. Similar views have been expressed by Guy de Chauliac, Ambrose Paré, Magatus, Wiseman, Billoste, Pibrac, J. L. Pettit, A. Munroe, John Bell, Saucerotte, Dedalot, Lafflize, Champeau, Camper, Lombard, Boyer, and others. Delpech performed tenotomy subcutaneously for the first time, May 19, 1819. In the object he sought to attain—the protection of the wound in the tendon from the injurious action arising from contact with the air—he was perfectly successful. Dupuytren performed subcutaneous myotomy in 1822; Stromeyer modified and improved Delpech's operation in 1831; and Dieffenbach published in 1835 (*Archives Générales de Médecine*) an account of numerous and remarkable successes he had obtained. Duval, Bouvier, and Jules Guérin each contributed to perfect subcutaneous operations. The remarkable success attending the subcutaneous operations, the absence of inflammation and suppuration, and the rapidity of healing favor the idea that the air contains some deleterious agent, which exerts an unfavorable influence on all open wounds. A similar conclusion is favored by a contrast between the results from simple or even comminuted fractures, as compared with a compound fracture, which always endangers life.

Lister's treatment is based upon the following conditions:

First, the continued exclusion from wounds of all living germs, or the prompt destruction of the same in those cases where they have gained admission, thus preserving in the wound an absolutely aseptic condition until it has healed.

Second, complete and uninterrupted approximation of the wound-surfaces.

Third, the avoidance of all irritation or any disturbance of relation of the wounded parts.

In reply to the query, Does the Lister system of treatment fulfil these indications and thereby secure the above-mentioned desirable results? Dr. Watson stated that "it must be admitted that every recognized scientific principle involved in this practice has been thoroughly examined, carefully studied, and fully recorded," and "it is possible to render *completely aseptic* nearly *all wounds* and to preserve them in this condition during the entire reparative process by the means employed in the Lister treatment." This is not *an empirical method*, but a *complete* system of practice, based on well-known scientific principles and facts, in which respect it differs widely from all its so-called modifications. The Lister system of wound-treatment is limited in its applicability to certain classes of wounds; and under certain conditions "the effects of unfavorable hygienic surroundings are certainly less to be feared than under other circumstances, and the same is unquestionably true of the other wound-complications." During the last fifteen years the influence of the doctrines of Lister has been gradually extending, until the old methods of wound-treatment are no longer employed, except when modified or improved by engrafting upon them certain parts of the Lister system, and many are based essentially upon it. This system now includes (Cheyne, "Antiseptic Surgery") "all those methods of wound-treatment in which, wittingly or otherwise, the growth and fermentative action of the lower forms of organism (bacteria) are more or less impeded." In this sense it has only required fifteen years for the essential principles of Listerism to become incorporated into the practice of all the surgeons in Christendom. The opposition to Listerism is entirely maintained by those who have never practised this system, or those who have abandoned it in part, as Mr. Keith, who has given up the spray. But other means may be adopted to prevent wound-contamination, without yielding the essentials of the Lister system of treatment. The objection that the spray is annoying to spec-

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tators is a frivolous one, and ought never to be urged when a human life is at stake.

In conclusion, the author discusses the so-called modification offered by Dr. Markoe, of New York, in his paper on "The Thorough Drainage of Wounds" (*American Journal of the Medical Sciences*, 1880), and asserts that the modification is insufficient to accomplish the desired results, and will not prevent or arrest inflammation, although it may exert a beneficial and restraining influence upon it. The proposed systematic irrigation of recent wounds was pronounced to be bad surgery. "We are now satisfied that the majority of surgeons are prepared to admit that *the system or method of practice* which gives the most complete rest to the wound while it is healing, and at the same time the most complete immunity from aseptic complications, *is the one which will always yield the best results.*" By this method operations have been successfully performed which otherwise would have only terminated in failure and disaster to the patient. The paper concludes with a quotation from Champonnière's "Antiseptic Surgery," lauding the system of Lister, and urging the faithful and careful observation of the principles laid down by the master.

Drs. Packard, of Philadelphia, Post, of New York, Vanderveer, of Albany, and C. H. Mastin, of Mobile, spoke in opposition to the details of the Listerian treatment.

Dr. Nancrede, of Philadelphia, advocated the use of the Listerian system. Dr. McGrath reported a case of death from acute carbolic acid poisoning from absorption after resection of a knee-joint in a boy; and Dr. Vanderveer referred to a case of ovariotomy lost from this cause. Dr. Prince said that if Listerism meant certain details of treatment, it is destined to be short-lived; if it means the principle of cleanliness and the antiseptic treatment of wounds, it is eternal. Dr. Dawson endorsed the last speaker's remarks, and thought that just as good results can be obtained from the ordinary treatment. Dr. Kinloch thought that these remarks may be misunderstood and place the Association in a false position before the surgeons of the world: it might be supposed that it is of the opinion that Mr. Lister has introduced an agent which never does any good and is capable of doing great harm.

Dr. Watson regretted that his remarks were misunderstood. Listerism does not consist in the use of carbolic acid, or in certain dressings, but in certain principles with regard to the healing of wounds. He had not asserted that the Listerian method is in use by the surgeons of the United States, but does assert that not an operation is performed in any large centre which is not in some manner influenced by Listerian principles in its treatment.

Afternoon Session.—The President, being authorized by motion, appointed a nominating committee,—Drs. Kinloch, Conner, Smith, Briggs, Prince, Comingor, and McGuire.

A communication was read by the Secretary, inviting the Association to pay a visit to the Cincinnati Hospital. The invitation was, on motion, accepted.

Dr. John H. Packard, of Philadelphia, read a paper containing a report of a "*Reamputation at the Hip-Joint—Secondary Hemorrhage, with Ligation of the Primitive Iliac Artery—Remarks on Ligations.*"

The case, R. K., æt. 23, was suffering with osteo-myelitis of stump, consecutive to thigh-amputation on account of a tumor. Before performing hip-joint amputation, an unsuccessful attempt was made to use Davy's lever; the femoral artery was then tied just below Poupart's ligament, as a preliminary measure. On the sixth day after the operation, which was by Furneaux Jordan's method, hemorrhage occurred, and the common iliac was ligatured in the ordinary way,—an incision two and three-quarter inches long, parallel with Poupart's ligament, lifting the peritoneum, and tracing the artery up to the common iliac, where a ligature was applied with an aneurism-needle, without exposing the common trunk to view. Twenty days after operation, the ligature was found lying in the wound; and the patient now is looking extremely well, the wound being almost entirely healed. He also referred to a similar case which he operated upon in the Beverly United States Army Hospital in 1864 (*New York Medical Journal*, 1865, and "Medical and Surgical History of the War of the Rebellion"), in which the ligature came away in twenty-one days. With his present experience, he would, before performing another amputation at the hip, apply a ligature to the primitive iliac, with the certainty that hemorrhage would thereby be most safely and effectively precluded.

Referring to the operation, he opposed the common opinion that an artery must be exposed to view before being tied, except with regard to certain vessels, such as the subclavian and axillary, where a ligature might be placed upon the brachial plexus by mistake; but where the vessel can be easily isolated complete exposure to view is unnecessary. He exhibited an instrument for use in passing a ligature, which he calls a detached

artery needle,—simply a blunt needle, somewhat sharply curved, and roughened near its blunt point, so as to afford ready hold to a pair of forceps.

In conclusion, the statistics of ligation of the primitive iliac artery were reviewed and criticised. Of American origin, it was performed in 1812 by Gibson, and was done to the saving of life in 1827 by Mott. A table containing the analysis and results of sixty-two cases was included in the paper, which in several instances varied from that in Agnew's Surgery, several corrections being made.

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Remarks were made by Dr. Fife, of Boston, Dr. Conner, of Cincinnati, and Dr. Packard.

Dr. T. G. Richardson, of Louisiana, read a "*Report of an Anomalous Case of Profunda Aneurism*," and illustrated his remarks with a diagram, and the specimen was presented for examination.

The case was that of a man, æt. 43, with gunshot wound of the thigh, in 1876. There was no serious hemorrhage at the time. The ball entered in front and upon the inner side of the axis of the limb, about four inches above the patella, ranged slightly downward, immediately across the track of the femoral artery, and emerged from the upper angle of the popliteal space, just external to the median line. The patient rapidly recovered, without lameness or other discomfort remaining. A tumor was discovered in April, 1878, an interval of eighteen months having intervened since the accident. The tumor so slowly developed that a physician's attention was not directed to it until May, 1879. Esmarch's bandage was applied to the limb, the tumor being recognized as a traumatic aneurism. The femoral artery was tied July, 1879. Thrombosis and gangrene necessitated amputation in December, 1881, nearly eighteen months after ligation. Death occurred on the fourteenth day. Examination of the limb showed that the femoral artery at the site of ligature was converted into a solid fibrous cord up to the origin of the profunda. There was dilatation of the profunda and its perforating branches. The arteries higher up did not appear to have undergone any change. Immediately below the obliterated segment of the femoral the lumen of the vessel was well preserved, and just at this point an anomalous branch of considerable size was given off. The distribution and anastomoses of the latter could not be determined in consequence of the gangrene.

Beginning at a point about four inches below, the main trunk gradually dilated to form the walls of the aneurism. The latter, oval in outline, except at one point, where it was slightly pinched, measured seven inches in length and three and a half inches in breadth at its widest point. Its walls were dense and about one-fourth of an inch in thickness throughout nearly their entire extent. Its contents were flocculent, with fibrinous filaments adhering to the wall. Upon its posterior wall, looked at from within and a little below the middle, was seen a remarkable knobby protuberance, an inch and a half in length, an inch in thickness, projecting into the cavity of the sac. This was found distended with coagulum. Although most diligent search was made, no communication with the sac could be found except at the entrance of the main artery above. The artery upon the distal side of the tumor was continuous with the exterior of the latter opposite the nodular protuberance just described, but was obliterated, and at the point of juncture spread out in a membranous form. Below this point to the extent of an inch it was represented by a small flattened fibrous cord, which gradually enlarged and became again pervious as it traversed the lower half of the popliteal space, but was not more than one-half the natural size. It was here filled with a coagulum which extended to the remote ramifications of the anterior and posterior tibials.

The femoral vein was smaller than usual, and its coats thickened, closely connected or continuous with the tumor along the base of the protuberance, and was found to communicate with the interior of the latter by a smooth, well-defined orifice, three-quarters of an inch in its longest diameter. It was occupied by a firm clot. The specimen was referred to a committee consisting of Drs. Nancrede, Kinloch, and Dawson.

Dr. Richardson also read a report of two cases of *successful resection of the ribs for empyæmia*. He recommended the use of a trephine for performing the operation, which he would restrict to cases due to chronic pleurisy or traumatism accompanied by a fistulous orifice, the object being to secure better drainage.

The paper was discussed by Drs. Truitt, Mears, Campbell, and Richardson.

SECOND DAY.

An executive session was held with closed doors at ten o'clock. The following Fellows were elected: Dr. McCann, of Pittsburg; Ad. Fenger, of Chicago; Tayler, of California; P. Peck, of Iowa; Dandridge, of Cincinnati. A number of bills were presented and approved.

During the morning session, Dr. S. W. Gross offered the following in order to facilitate the proceedings:

"*Resolved*, That authors of papers shall be allowed to occupy twenty minutes in their reading, remarks in discussions to be limited to five minutes, and Fellows not to be permitted to speak twice without unanimous consent."

This resolution was adopted.

The first paper read in open session was by the President, who called Prof. Gunn to occupy the chair during the reading and discussion.

The subject of Prof. Gross's paper was "*The Value of Early Operations in Morbid Growths.*"

The object of the paper was stated to be the placing of the value of early operations for the removal of morbid growths in a stronger and clearer light than any in which it had hitherto been presented. The reasons for early removal are: 1, the less risk of shock and hemorrhage; 2, the more effectual riddance of the diseased structures; 3, the diminished probability of septicæmia or blood-

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poisoning; 4, the avoidance of unsightly scars; and, 5, the less risk of recurrence of morbid action, either at the seat of operation or in other parts of the body.

The local origin of morbid growths is now generally admitted, but an hereditary tendency to the development of such neoplasms was recognized, not only as regards malignant, but also in benign growths, such as warts and sebaceous cysts, which have been observed in three generations. Morbid growths, tumors, and neoplasms are the product of perverted nutrition, in which a comparatively few cells native to the part are replaced by colonies of new cells, of which the product, or new growth, is mainly composed.

He stated that "all morbid growths are developed, directly or indirectly, under the influence of inflammatory action, the result of external injury, or, as is more frequently the case, of some mechanical obstruction, causing, in the first instance, congestion of the part, and this, in turn, incited action and inflammation, both leading, sooner or later, to abnormal cell-growth, cell-formation, or cell-development. It is in this way, and in this way alone, that we can satisfactorily explain those morbid growths, both benign and malignant, which, as the phrase goes, arise without any assignable cause. One of the most simple of all tumors, the sebaceous, is formed under the irritating influence of its own natural secretion retained by the closure of its natural outlet. Obstruction of a lacteal duct is, there is no doubt, a frequent starting-point of scirrhus of the mammary gland. There is not a surgeon of any experience anywhere who has not occasionally met with cases of carcinoma which were due, directly or indirectly, to the effects of local injury." With these fundamental principles in view, the importance of early operation is manifest, and experience shows its necessity.

Referring to the difficulty of diagnosis, the advice was given, in cases of doubt, to seek consultation rather than to allow the growth to develop, thus increasing the danger to the patient. In a case of carcinoma of the breast, especially was the surgeon warned against the waiting for the development of secondary growths in the axilla, and till involvement of the general health occurs. Patients should be taught the risk of delay. Not only should growths be removed early, but the extirpation should be done as thoroughly as possible. If this cannot be done, it will be better, in advanced cases of carcinoma particularly, not to meddle with the growth at all, except to remove an offensive ulcerating mass and to substitute for it a clean wound. The longer the knife is withheld, the greater danger there will be that some of the cancer-cells will be left behind, which will subsequently serve as new centres of morbid action in the neighborhood. Sarcomata are especially apt to return in the internal organs, and the worst form is the round-celled. Any rapidly-growing tumor is, as a law, a bad subject for successful surgical interference. Even benign growths of rapid development cannot be extirpated too soon: as illustrations of this principle, cystic growths of the ovary, chondromous fibromas, and osteomas; and as analogous illustrations, stone in the bladder, and pneumonia, in which the contrast between early and late treatment is very marked.

Remarks were made upon the paper by Drs. Moore, of Rochester, and Gregory, of St. Louis.

A paper on "*Dislocation of the Astragalus*" was read by Dr. Basil Norris, U.S.A., of Washington, in which, among other cases, he cited his own experience, having suffered such an injury as a result of being thrown out of his carriage. Prompt reduction was followed by complete recovery in his own case. The clinical notes of several cases of uncomplicated dislocation of the astragalus, reported by different surgeons, were also communicated, with two instructive cases of partial dislocation of the astragalus forward of long standing, reported by Mr. George Brown in the Proceedings of the Clinical Society of London (February, 1876); and a compound dislocation of the astragalus, reported by Dr. John A. Grant (*Canada Med. Jour.*, October, 1865), reduced by simple manipulation: cold-water dressings were applied, and recovery with perfect motion followed.

Similar cases were mentioned in the discussion by Drs. Gregory, Moore, Gunn, Conner, and others.

Dr. P. S. Conner, of Cincinnati, read a paper on "*Excisions of the Tarsus.*" Admirably adapted as is the foot to sustain weight, diffuse force, and secure ease and quickness of movement, it is, in its proximal half at least, peculiarly liable to disease and the extension of inflammation from part to part. Placed where it must of necessity be subjected to violent jars and severe twists, every opportunity is afforded for the occurrence of limited blood-extravasations in its bones, and of traumatic synovites in its joints. Its skeleton is made up almost entirely of cancellous tissue, covered in by closely-adherent periosteum, that blends so intimately with the ligaments of the numerous articulations that it may, surgically considered, be regarded as a single sheet enclosing the whole tarsus. It is crossed by numerous tendons and overlaid by a definite though not very thick sheet of connective tissue, so that thecal and fascial inflammations may readily, by contiguity, be carried over to it. In this manner, he proceeded to show, strumous subjects may have, as a result of traumatism, either simple inflammations or the deposit of tubercle in the bones, synovial membranes, or periarticular structures. Gumma may likewise develop here, and external violence, contusions, cuts, compound fractures (gunshot or other), may

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be the developing cause of caries or necrosis.

Tarsal disease being thus of frequent occurrence, what shall be done for its relief? When the local disease has, more or less, progressed to destruction of the part, the periarticular structures greatly thickened, abscesses formed, and numerous sinuses exist leading down to dead bone, surgical interference is limited to—

1. The opening of the abscess-cavity, and the informal removal of carious or necrosed tissue, with or without deep cauterization, or such local stimulant applications as shall tend to secure more healthy and reparative action;

2. Amputation, usually at or above the ankle-joint; and,

3. The methodical excision of such and so many of the tarsal bones as are unhealthy.

He stated that the first method, in one form or another, has long been employed, and in the less severe cases may be expected often—perhaps generally—to result favorably. It is under this head that we must place the use of the actual cautery, so highly recommended by Ollier and others of the French surgeons, the *évidement* of Sédillot, and the gouging and oakum-seton method of our distinguished Fellow Dr. Sayre.

By surgeons, generally, amputation at the ankle has been, and still is, regarded as much to be preferred to any more conservative treatment.

Within the last twenty years, cases of extensive resection of the ankle have been reported. In order to determine definitely whether the asserted dangers of this operation are real, whether or not its mortality is greater than amputation, and as to the likelihood of the disease to return, and the question of usefulness of the member, he had collected all the cases he could find, amounting to one hundred and six excisions of two or more bones, after quoting the clinical history of two patients of his own, in which the entire tarsus was removed, recovery following, securing a very serviceable foot. Of the entire one hundred and six cases, eleven died (10.38 per cent.), but one of these perished with amyloid disease within ten days, and one of phthisis in a month: thus the mortality is really not more than 8.5 per cent, and if Tiling's case be also thrown out (gunshot injury, followed by intermediary excision and amputation five days later, death from gangrene at the end of another five days) the percentage is reduced to 7.54. Of the nine fatal cases (including Tiling's), in four at the lowest a Syme amputation, and in five a Chopart, would have had to be performed; or, in other words, out of sixty-one cases in which the alternative was an ankle-joint amputation, four died (6.55 per cent.), and out of forty-five in which a middle-tarsal removal might have been made (though without doubt in some of them a Syme or Pirogoff amputation would have been performed), five died,—11.11 per cent.

The Syme operation mortality for caries is about six to eight per cent. (at least ten per cent. according to Delorme); the Pirogoff probably about the same; and the Chopart perhaps four per cent., though Schede has placed it as high as ten per cent.

Examination of the table shows that while it is true that excision is attended with very much less mortality in young subjects, the opinion expressed by certain writers that it should be confined to them is not warranted by experience. Of seventy-seven cases, twenty-seven were not over fifteen years of age, of whom but one died (3.7 per cent.); seventeen were between fifteen and twenty-five years old, of whom one died (5.88 per cent.); and thirty-three were older, of whom six died (18.18 per cent.). Of those in whom either the entire tarsus or at least the whole of one of its great divisions was taken away, the death-rate was—under fifteen years, 6.67 per cent.; over fifteen and under twenty-five years, 10 per cent.; over twenty-five years, 27.27 per cent.

Of the six operations for gunshot injury, the subjects of which were all adults, one (Tiling's) resulted in death (16.67 per cent.).

In four of these six, including the fatal one, an ankle-joint amputation would otherwise without doubt have been performed,—an operation which after gunshot wound, in our late war, had a mortality-rate of 25.1 per cent.

As respects the preservation of life, then, excising the whole tarsus or one of its great divisions is not much, if any, more dangerous than an ankle-joint amputation, and not much more so than a middle-tarsal operation. It has the added advantage of permitting subsequent removal of the foot if required. In the cases tabulated this was done seven times, with but a single resulting death. In only two cases did the disease reappear, owing to the thorough removal of the diseased bone.

With regard to the usefulness of the member, it was found that in thirteen of the ninety-five cases the records were made too early, or without clearly indicating the end result; ten were failures, amputation being required in seven of them; forty-four times the ultimate value of the foot was "very good," and twenty-two times "good;" that of one hundred and six operations, 10.38 per cent. resulted fatally; of ninety-three cases, the results of which are known, 10.75 per cent. were failures, 6.45 per cent. left the subjects able to walk with a cane or crutch, and in 23.65 per cent. there was, after complete consolidation had taken place, no pain or tenderness, little or no limp, and the individuals were not prevented by the condition of the foot from earning a livelihood, and in 47.31 per cent. the result was so good that the gait was not a bad one,—the support of the body was firm, and the patient could walk long distances.

In conclusion, he discussed the details of the operation in his own cases, and the con-

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tra-indications to operation, the chief one being such a condition of the system as demands immediate relief and speedy recovery, in which case amputation would be preferable. An elaborate table, containing an analysis of the one hundred and six operations, accompanied this communication.

Very early or advanced life is not a contra-indication; and he remarked, in conclusion, that the evidence is conclusive that even advanced tarsal disease does not necessitate amputation of the leg. The two patients operated upon by Dr. Conner were then presented, and were examined by the Fellows. The entire tarsus had been removed in each,—one in July, 1875, the other in April, 1876,—and each has a useful foot and is able to walk without a cane, and is earning his own living at an active occupation.

Dr. S. Marks, of Milwaukee, read a report of a "*Case of Trephining of the Sternum for Removing Foreign Bodies from the Anterior Mediastinum.*" A soldier was struck in 1864 by a spent bullet, as was supposed, upon the sternum, which apparently did not penetrate the chest, as this opinion was expressed by surgeons who examined him after the injury. Subsequently an abscess developed, followed by a sinus in the soft parts over the sternum, with free discharge of pus, which persisted patulous for six years. Necrosis of sternum existed, and a perforation was found leading to an abscess-cavity containing a foreign body, which was ascertained to be a Minié ball in two fragments (weighing ʒv—gr. xxi). This was subseqently removed by trephining the sternum, the ball being found encysted in a fibrous capsule.

Afternoon Session.—Dr. E. M. Moore, of Rochester, read a paper entitled "*Some Questions with Reference to Intra-Capsular Fracture of the Femur.*" After reporting several cases and illustrating his remarks with a number of specimens showing bony union after fracture of the neck of the femur, he submitted, in conclusion, the following suggestive questions:

1. "Is not the cause of fracture of the neck of the thigh-bone, whether intra- or extra-capsular, almost uniformly a blow upon the trochanter?"

2. "Is not the preservation of the periosteum of the neck (called, in connection with the reflected capsule, the cervical ligament), although only partial, the common rule, and not the exception?"

3. "Does not this condition, if preserved, supply nutriment to the upper fragment sufficient to entire repair?

4. "Is not the outer layer of what is called the periosteum of the neck a rudimentary organ?"

5. "In *reputed cases* of absorption of the neck after blows upon the trochanter said to be without fracture, is it a reasonable—much less a perfect—induction to infer a similar result when the changes of condition are similar only in one point and dissimilar in every other, those of inflammation without a blow?"

"6. Should not the induction read thus? The head of the femur and the acetabulum not being altered, the shortening of the neck could not be from inflammation resulting from the blow. Finally,

"7. Does not the practice of modern surgeons produce vastly-improved results in the cases treated by them, as compared with the method of the last generation?"

Dr. Moore recommended the use of moderate counter-extension, with lateral support and the horizontal position, in the treatment of injuries of the head of the femur, even when the existence of a fracture cannot be absolutely recognized.

Dr. Nicholas Senn, of Milwaukee, read an elaborate treatise on "*Fractures of the Neck of the Femur, with Special Reference to Bony Union after Intra-Capsular Fracture.*" This paper contained a report of a series of physiological experiments upon animals, made with a view to studying the pathology of this form of injury and the results of various methods of treatment. It demonstrated more or less conclusively the fact that bony union was the rule rather than the exception, and showed the value of accurate adaptations of the parts of the bone, and immobilization of the joint.

To facilitate the application of these principles to clinical surgery, he presented an apparatus to be incorporated in a plaster-of-Paris bandage for making pressure upon the greater trochanter. He particularly cautioned against converting an impacted fracture into a complete one by incautious manipulation during examinations, which might result in non-union, and also against changes in the dressings at the fifth or sixth week, when the condition of the bone renders it unusually liable to separation. He believed that bony union in the human subject would not be complete until the one-hundred-and-twentieth day, and advocated the introduction, in certain cases, of ivory or bone pegs to keep the fragments in position.

A table of fifty-four cases of bony union after fracture of the neck of the femur was included in the paper, which was divided, for consideration, into a series of separate essays, with the following heads or chapters:

The Anatomy of the Neck of the Femur; Predisposing Causes of the Fracture; Symptoms of Fracture of the Neck of the Femur; Diagnosis; Non-Union after Intra-Capsular Fracture; A Specimen of Bony Union after Intra-Capsular Fracture; Bony Union after Intra-Capsular Fracture; Impacted Fracture of the Neck of the Femur; Production of Callus; Can Loose Detached Pieces of Bone produce Callus? Senile Osteo-porosis; Incomplete Fractures of the Neck of the Femur;

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Experiments upon Animals; Treatment of Fracture of the Neck of the Femur.

Remarks were made by the President and Drs. Moore, Gunn, Vanderveer, Fifield, Nancrede, Kinloch, Campbell, and Senn, which occupied the rest of the afternoon. No agreement of opinion was arrived at as to the possibility of true bony union in cases of intra-capsular fracture, and the methods proposed by Dr. Senn in the treatment were regarded with considerable suspicion, if not regarded as unwarrantable. Dr. Senn, in conclusion, said that the worst thing that could happen to a patient with fracture of the neck of the femur was treatment by the old method of strict confinement in bed. His methods were aimed merely at immobilizing the limb and yet allowing the patient an opportunity to be taken out into the open air. He contended that the possibility of bony union within the capsule had been established beyond question.

The Association had its annual banquet in the evening.

THIRD DAY'S PROCEEDINGS.

The report of the committee appointed to examine the specimen presented by Dr. T. G. Richardson was received and discussed. The committee decided—1. That the original injury consisted of a contusion of the walls of both the artery and vein, with consequent adhesion at the site of injury. 2. That the inflammatory processes culminating in the adhesion of the two vessels resulted in such a weakening of the walls, probably coupled with a limited destruction of the external coats of the vessel by the vulnerating body, as to render an aneurismal dilatation a necessary consequence. 3. That the similar probably partial destruction, and certainly the inflammatory softening, of the venous walls at the point of adhesion, resulted in a slight pouching towards the lumen of the artery. 4. That the projection thus commenced, however minute, was acted upon to the utmost advantage by the arterial current, which tended to enlarge the growth by an actual traction-force, as it were, in the direction of the blood-flow: this is proved by the fact that the small sac is elongated on the distal side of the venous opening. 5. That the projecting venous sac must have served to obstruct the lumen of the artery from the moment of its formation, and have acted somewhat in the way an embolus has been known to do, as the exciting cause of aneurism, by producing undue intra-vascular pressure in an artery with softened walls. 6. That the obliteration of the lower extremity of the artery, which occurred subsequent to the ligation while an anastomotic branch communicated through the patulous lumen of the artery with the sac, is the cause of the non-coagulation of the sac contents. The apparent paradox that blood can enter into and emerge from a tensely-filled sac is rendered clear when the physical surroundings of the sac are considered. The muscles of the region must have alternately emptied the sac by their compression and allowed it to refill when they relaxed.

The committee, consisting of Drs. Nancrede and Kinloch, considered that the peculiar features of the case would find a more satisfactory solution in this manner than on any other hypothesis which had been suggested.

The report of the committee was discussed by Dr. Campbell, of Georgia, who did not regard the case as anomalous.

Dr. S. W. Gross, of Philadelphia, read a paper on "*A Case of Nephrectomy for Medullary Carcinoma, and Partial Choleo-Cystectomy for Calculus in the Same Subject.*"

The patient, a widow, 59 years of age, had first noticed a small and painless tumor in the right iliac fossa in January, 1883. She had attacks of hæmaturia, once towards the end of February, and twice in March. About the middle of February she had pains in the loins, particularly on the right side, which increased with the growth of the tumor. Dr. Keating diagnosticated the case as one of carcinoma of the kidney, and invited Dr. Gross to see it in consultation in April. At this time the tumor was as large as a child's head, nodulated, firm, mobile, everywhere dull on percussion, occupying the lower right lumbar and inguinal regions and about one-third of the hypogastric region.

The operation of laparotomy and nephrectomy was performed April 20. The tumor was recognized as an enlarged kidney, and over its surface the peritoneum contained a number of large vessels, and considerable hemorrhage was caused by the enucleation of the tumor, making it advisable to ligature the pedicle *en masse*. A separate catgut ligature was required for the renal artery. There being an obstructed and distended gall-bladder, containing a stone the size of a Spanish olive, the calculus was drawn into the fundus of the gall-bladder, and the duct included in a ligature: the gall-bladder and contents were then removed.

All the ligatures were cut short, the peritoneal cavity carefully cleansed, the incision drawn together with silvered sutures, and a drainage-tube was inserted at the lower angle of the wound, which was covered by carbolized gauze. The operation required fifty-five minutes. No spray was employed. The patient died sixty-five hours after the operation, from peritonitis, complicated by suppression of urine for twenty-eight hours before death. The fatal result was explained by the autopsy, which showed the remaining kidney in an advanced condition of cancerous disease. It weighed eighteen ounces, and measured fifteen and one-half by ten and one-quarter inches in its long and short circumference. With the exception of an inch at its upper

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extremity it was converted into a medullary tumor, which, on microscopic examination, proved to be carcinomatous.

Reviewing the literature, Dr. Gross found twenty-two cases of extirpation of the kidney for carcinoma and sarcoma: of these one was still under treatment, nine recovered, and twelve died. He considers that the removal of the kidney for malignant disease cannot be advocated, on account of its large mortality (fifty seven per cent.), and because it does not materially lengthen life: still, if the patient is willing to take the risk, he is entitled to the possible chance for recovery and non-recurrence, especially in the early stage of the disease. The following rules were laid down for operating: the capsule of the organ should always be removed; the incision, when the growth is large, should be made along the outer side of the rectus muscle, as recommended by Langenbach, through which the ureter and renal vessels can be more readily and safely reached than through the median ventral incision. The ureter should be pinned outside the abdominal incision, so that the septic material which it contains may not be left in the cavity of the belly; there is also a danger that the ureter may slough if dropped inside the peritoneal cavity.

Dr. J. Ewing Mears read a report of "*A New Operation for Permanent Closure of the Jaw*," employed in a case of gunshot wound of the face, eighteen years after the injury.

Dr. A. Vanderveer, of Albany, read a paper on "*Removal of Meckel's Ganglion, for the Relief of Trifacial Neuralgia, with Report of Cases.*" He submitted the following cases:

Case I.—Mr. S., 58 years of age, had suffered for ten years with neuralgia of the right side of the face. Two operations had been performed by loosening the attachment of the cheek from the alveolar processes, affording each time a few months' relief. The operation was repeated by Dr. Vanderveer, with total remission for a time. The neuralgia returns occasionally. The removal of Meckel's ganglion was recommended, but has not yet been practised.

Case II.—Miss B., 40 years of age, had been subject to right trigeminal neuralgia, for which she had all her teeth removed from the right side without relief. For six months had constant pain. Dr. Vanderveer removed part of the infra-orbital nerve and Meckel's ganglion by making an incision from the angle of the eye down to the bone along the nose for a distance of little more than an inch, then another incision an inch in length at a right angle under the infra-orbital ridge. Raising the flap and periosteum, he exposed enough of the anterior wall of the antrum to admit the application of a good-sized trephine, removing a button of bone so that the upper edge of the opening exposed the infra-orbital nerve. Lifting the latter with the superior maxillary from its bed by means of bone-chisel, grooved director, and probe, he followed it until he reached the posterior wall of the antrum, where, by means of a smaller trephine, another button of bone was removed, and the spheno-maxillary fossa was reached. The ganglion was now lifted from its bed, and with curved scissors the nerve and it were severed and removed. This was followed by a sharp hemorrhage, controlled by packing the cavity with sponge attached to a silk ligature. The wound in the face was closed by interrupted sutures, a drainage-tube, with ligature from the sponge, being placed in the most dependent point. Considerable suppuration followed, and trouble was experienced in removing the sponge; but the wound ultimately healed, and complete relief was obtained, the patient now being in perfect health.

Case III.—A widow, 37 years of age, had lost the right eye by perforating ulcer of the cornea at two and a half years of age. Inflammation occurred in the eye, as the result of cold and over-work, six years before coming under observation; removal of the eye was then recommended and refused. Attacks of facial neuralgia subsequently occurred. Enucleation of the eye being again refused, removal of Meckel's ganglion was performed. Subsequently the neuralgia returned, and section of the inferior dental nerve was practised. The pain afterwards returned, and the eye was finally removed, since which time she has been very comfortable. The eye was probably the cause of the reflex irritation.

Case IV.—A farmer, 68 years of age, who received a severe blow over the left malar bone about thirty years previous. For fourteen years he had suffered dull pain in this part, which was succeeded by trigeminal neuralgia on this side of the face, which became nearly constant. Complete relief was afforded by the operation of removal of Meckel's ganglion: in six days the wound had healed, and perfect and permanent relief was enjoyed.

The paper was discussed by Drs. Campbell, Conner, Dawson, Briggs, and Vanderveer.

An executive session was held at the close of the morning's session.

The Council recommended the following for Fellowship: Dr. H. K. Steele, of Denver, Colorado; Dr. Herbert Judd, of Illinois; Dr. Thos. M. Markoe, of New York.

The Committee on Nominations made the following report:

OFFICERS FOR 1883–84.

President.—Dr. E. M. Moore, Rochester, New York.

First Vice-President.—Dr. W. W. Dawson, Cincinnati.

Second Vice-President.—Dr. C. H. Mastin, Mobile.

Secretary.—Dr. J. R. Weist, Richmond, Indiana.

Treasurer.—Dr. J. H. Packard, Philadelphia.

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Recorder.—Dr. J. Ewing Mears, Philadelphia.

Member of Council.—Dr. P. S. Conner, Cincinnati.

On motion, the Secretary cast the ballot for the Association, and declared the officers unanimously elected. The next place of meeting is to be Washington, D.C., on the Wednesday before the meeting of the American Medical Association.

At the opening of the session in the afternoon Dr. J. M. Barton exhibited to the Association a splint which he had used for some years for synovitis of the wrist-joint: the splint is light, makes effective extension, is not conspicuous, and permits some use of the fingers.

The splint is made of wire, is about eleven inches long, and from one and a half to two inches wide. It is placed on the palmar aspect of the forearm, reaching from a little below the elbow to a half-inch below the lower end of the metacarpal bones; the upper extremity (B) is slightly indented, to receive the adhesive plaster used in the counter-extension; on the lower extremity (A) a light wooden roller is placed, over which the extending-band plays.

The extension is made by a piece of heavy rubber-elastic, which is fastened to the upper cross-wire (at B), and to the extending-band after it passes over the roller (at A).

The extending-band is attached to the hand most conveniently by sewing a heavy kid glove on the hand, cutting off all the fingers of the glove except those of the middle and ring fingers: these two are split down the back, and retain their attachment to the palm of the glove only; they are passed over the roller and tied by a piece of cord to the rubber extending-band, the upper end of which is attached to the upper cross-wire (at B).

The counter-extension is made by two strips of adhesive plaster, each two inches wide and one foot long: to adjust them, start the first at the radial side of the wrist-joint, run it up the outer side of the arm, over the upper end (B) of the splint, resting in the depression, and then down the ulnar side of the forearm to the wrist; the second strip is applied in a similar manner, both strips necessarily nearly covering the forearm. A light bandage may be carried from the wrist up to keep the plaster in position. The extending force is determined by the tension of the rubber band, from one-half to one pound of pull being quite sufficient.

Balloting for new members by the Association resulted in the election of Dr. Thomas M. Markoe, of New York City, as resident Fellow.

On motion, the committee appointed to prepare a diploma for Fellowship offered a resolution that an honorarium of twenty dollars be tendered to Mr. H. S. Brown, of Philadelphia, for assistance rendered. The resolution was adopted.

Resolutions were offered providing that the expenses of the meeting incurred by the Committee on Entertainment be paid out of the funds of the Association, and were agreed to.

An amendment increasing the limit of membership from one hundred to one hundred and fifty was lost.

The amendment proposed, altering the manner of nominating candidates for Fellowship, was also lost.

Dr. S. W. Gross announced that he would offer an amendment at the next meeting, increasing the number of members of the Council from four to ten.

Prof. S. D. Gross gave notice of an amendment to be brought up next year, that all amendments to the Constitution and By-Laws be acted upon on the final day of each session, without lying over for one year.

Dr. Kinloch called attention to a printed petition in opposition to the Code of Ethics, to which the names of several Fellows of the Association were affixed, and offered a resolution that it be referred to the Council.

On motion, it was decided that the Association shall hereafter have an annual dinner, to be paid for by the individual Fellows taking part in the same, instead of being entertained by the local members.

Thanks were given by resolution to the members of the Committee on Entertainment.

Dr. David Prince, of Jacksonville, Ill., read a *description of a rectal obturator*. This was in reality a dilator, consisting of a Wales's bougie, to which he had attached an obturator, which, being inserted into the rectum, would prevent the escape of fluid from the anus. The apparatus is constructed especially,—

1. For enabling the alimentary canal to hold two or three gallons of water in cases of obstinate constipation, of obstipation, and of strangulation, or for the speedy and complete washing out of the alimentary canal on any account.

2. For the holding in the alimentary canal of comparatively large amounts of nutritious fluids in cases in which the introduction of food by the mouth is impracticable.

3. For the holding in the large intestine of an adequate quantity of alcoholic liquids, introduced for anæsthesia in surgical operations, or injuries, or for the alleviation of shock or terror from any cause, or in all conditions in which alcoholic anæsthesia is desirable.

4. For the speedy dilution of the blood through the absorption of water from the intestinal surfaces in order to stimulate the kidneys to filter out any poisonous constituents of the blood, whether these impurities have been introduced by accident or design,

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or whether they have been developed in the blood and in the glands by the chemical process incident to disease.

5. For the reduction of temperature in fever and inflammation by the more ready discharge, through the various emunctories, of irritating material by the thinning of the blood through the introduction of water.

He further stated that the expedient explained in this paper can be executed without any special apparatus. Introduce by the anus a speculum. Pass a large catheter as high as convenient, and around this pack a roller-bandage, pushing in a piece at a time, leaving the end of it projecting for convenience in withdrawal. Then withdraw the speculum. More than one roller-bandage may be employed if necessary, but an end of each bandage should be left hanging out, to avoid the necessity of searching the rectum for it. Attach a syringe to the catheter, and proceed with the injection. In the employment of water in the emergency of an intestinal obstruction, a moderate leak by the obturator is only an inconvenience, requiring the employment of a larger quantity of water. He also recommends its employment for rectal alimentation, and for the introduction of alcohol into the system.

Dr. Campbell, of Georgia, gave a description of several cases of "*Stricture of the Œsophagus, with Remarks on Treatment.*" The frequency of cases of accidental poisoning by caustic lye calls for a careful consideration of the treatment. Dr. Campbell is opposed to all cutting operations, but strongly urged the use of graduated bougies, aided by rectal alimentation during the treatment.

The Council, having the matter referred to it by motion of the Association, and a recess of fifteen minutes having been taken for its consideration, brought in the following report for action:

"*Resolved*, That the Secretary be instructed to address a communication to each Fellow, active or honorary, who is alleged to have violated the Code of Ethics adopted by the American Surgical Association, and request him to withdraw from this body if the allegation be true."

The report was, on motion, adopted.

The following was offered by Dr. Dawson, and was carried with applause:

"*Resolved*, That the thanks of this Association be returned to its retiring President, and that the members of the Association unite in the hope that he may be long spared to meet with us, to cheer us with his presence and guide us with his wise counsels."

Resolutions were offered by Dr. Bontecue, of New York, calling upon our representatives in Congress to make sufficient appropriation to furnish a fire-proof building for the library of the Surgeon-General's Office, and to maintain the library, and to continue the publication of the Index Catalogue.

This was also adopted.

A resolution was passed directing the publication of a volume of Transactions, the number of copies to be left discretionary with the committee.

Dr. Campbell presented some apparatus for fixation of the elbow-joint, devised by Dr. Coleman, of Augusta.

Dr. Bontecue advocated irrigation in cases of cystitis.

The Committee of Arrangements was authorized to change the time or place of meeting if thought proper.

Prof. Gross made some very feeling remarks upon retiring from the presidential office, which he had filled so ably for four years, and said that his interest in the Association would cease only with life.

The Association was then declared adjourned.

GERM-THEORY IN MEDICINE.—In a formal reply to M. Peter, who recently made a vigorous attack upon what he regarded as a premature application to clinical medicine of the recent theory of the origin of zymotic diseases, especially in practical therapeutics, M. Bouley incidentally reviewed the discoveries of Pasteur, and discussed some of the advantages that have already been derived from their application, and mentioned some of the results which may reasonably be expected in the future by following in the path he had opened. The length of the communication forbids its analysis here, but those interested in the germ or microbe theory in medicine will find in this portion of the discussion at the Academy of Medicine upon the epidemic of typhoid fever in Paris a fair statement of the side of the question opposed to that taken by Dr. Peter, as well as a very interesting review of the present standing of the microbe doctrines in medicine.—*Bulletin de l'Académie de Médecine*, No. 14.

CASE OF LABOR WITH ATRESIA VAGINÆ.—A paper by Dr. Fancourt Barnes was read before the Obstetrical Society of London, containing a report of a patient, aged 21, pregnant for the first time. The vagina was represented by a cul-de-sac about an inch and a half deep, at the bottom of which was a pin-hole aperture, the orifice of a canal of no larger dimensions, leading into the uterus. This canal traversed about two inches of tissue before reaching the uterine cavity. The patient was anæsthetized, and the canal stretched with a Priestley's dilator, then incised on each side with Simpson's metrotome, and still further enlarged by laceration with the finger. Delivery was then accomplished with Barnes's forceps, it being found impracticable to apply Tarnier's. The operation lasted an hour, and was performed under carbolic spray. Mother and child did well.—*British Medical Journal.*

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PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, JUNE 2, 1883.

EDITORIAL.

MEDICAL AND SURGICAL HISTORY OF THE REBELLION.

UPON the table before us rests the third surgical volume of the Medical History of the War. By its publication one-half of the greatest work ever attempted in military medicine is completed,—the result not of the brilliant genius of one man, but of the labor and devotion of a large number of men, though finally shaped and fashioned by a few persons singularly fitted for the task. In their records of suffering and death these volumes will remain to all time a great memorial of the devotion of the American people to an idea, and in their portrayals and deductions they will be useful as well as monumental landmarks to the military surgeons of the world.

The lamented death of Surgeon Otis, of course, necessitated the appointment of a successor; and, happily for our art, the lot fell upon Surgeon D. L. Huntington, who has performed his task so well, and has so fully entered into the spirit of the original master, that we do not believe any one could tell where runs the joint between the new work and the old.

The continued ill health of Surgeon Woodward has, unfortunately, prevented the production of the companion medical volume, which is still necessary for the completion of the whole work. If the good wishes and urgent desires of the united medical profession of the world had power over the ills flesh is heir to, the long quiet and lonely desk of Dr. Woodward would soon again be cheery with its abundant buddings-forth of intellectual labor.

THE CARE OF SICK SAILORS.

AS every one knows, the sailors of the United States Merchant Marine are taxed to support a fund for their own care and maintenance during sickness. Formerly, marine hospitals were maintained only in places where there were no available civil hospitals. In most cases the sailors were taken care of at the civil hospitals, which were paid so much a week from the fund for each patient. It costs very little more to run a hospital with all of its beds occupied than with half of them empty; and most Boards of Managers, for the sake of filling their institutions, were willing to take the men at a rate less than they cost.

Considered as a whole, hospital staffs represent the best talent of the profession; and we think that most physicians will agree with us that by the old arrangement the sailors received not only kind consideration at a very low cost, but also the benefit of exceptionally good professional skill.

There was in the history of the fund a time when a mania arose for the building of hospitals, and, as there are some symptoms of a renewed outbreak, we would urgently call the attention of the profession to the subject. The money for building hospitals was not taken from the marine fund, but was obtained by appropriations secured from Congress by means which can readily be understood by those who have watched the progress of a River and Harbor Improvement bill. Snaketown mechanics need work, real-estate holders need realization, the sailors need a hospital. Jonesville is in a similar condition; so also is Titusburg. A Congressional Representative, full of local zeal, aided by other local Representatives, offers a bill in Congress and pushes it forward, and constituents in Snaketown and Jonesville are only too happy to return to Congress a Representative who has so aided their local advancement.

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How much money has been wasted in Marine Hospital building is unknown; but the following table epitomizes the information we have been able to get:

Tabular Record of the United States Marine Hospital Buildings from A.D. 1800 to the close of the fiscal year 1877.—Annual Report of Marine Hospital Service, 1877, p. 30.

Location.	Purchased or Commenced.	Occupied.	Cost to Date.	Condition or Disposition.	Proceeds of Sale.	Gain.	Loss.
Norfolk, Va.	1800	.....	$22,395.10	Sold, 1839.	$15,613.80	.....	$6,781.30
Boston 1	1802	1804	14,842.34	" 1824.	12,875.00	.....	1,967.34
Boston 2	1825	1827	32,168.06	" 1867.	54,803.38	22,635.32	
Boston 3	.....	1860	395,603.06	In use.	.....	.....	
Charleston, S.C. 1	1815	1834	26,685.77	Sold, 1866.	9,500.00	.....	17,185.77
Charleston, S.C. 2	1832						
New Orleans 1	1837	1849	122,772.70	Sale not completed.			
New Orleans 2	1855	.....	530,090.84	Unfinished: completion impracticable; ordered sold, Act March 3, 1873: $19,000 only bid.			
Mobile	1838	1843	56,104.72	In use.			
Pittsburg	1842	1851	72,554.57	Sold.	57,947.33	.....	14,607.24
Louisville	1843	1852	101,456.35	In use.			
Cleveland	1844	1852	122,831.03	In use.			
Natchez	1845	1852	66,755.00	Sold.	5,000.00	.....	61,755.00
Key West	1844	1845	35,972.71	In use.			
Ocracoke, N.C.	1843	1847	9,227.07	Abandoned.	.....	.....	9,227.07
Paducah, Ky.	1852	1852	58,525.77	Burned, 1868.	6,571.34	.....	51,954.43
Napoleon, Ark.	1855	1855	62,290.83	Destroyed, 1868.	30.00	.....	62,260.83
Chicago 1	1849	1852	64,070.98	Sold, 1864.	132,000.00	67,929.02	.....
Chicago 2	1867	1873	423,246.08	In use.			
St. Louis	1850	1858	116,366.17	In use.			
San Francisco 1	1851	1854	231,871.10	Transferred to the city for Soldiers' Home.			
San Francisco 2	1874	1875	77,946.73	In use.			
Evansville, Ind.	1853	1856	73,078.56	Sold, 1867.	10,507.11	.....	62,571.45
Vicksburg, Miss.	1853	1856	67,775.16	" 1870.	20,257.52	.....	47,517.64
Portland, Me.	1852	1859	123,553.59	In use.			
Pensacola, Fla.	.....	.....	1,052.96				
Detroit, Mich.	1855	1857	110,038.51	In use.			
Cincinnati, O.	1856	.....	182,665.48	Sold, 1866.	70,500.00	.....	112,165.48
Burlington, Iowa.	1856	1858	29,996.84	" 1867.	6,000.00	.....	23,996.84
St. Mark's, Fla.	.....	1859	25,758.00	Transferred to War Department, 1867.			
Burlington, Vt.	1857	.....	39,572.30	Sold, 1866.	7,164.41	.....	32,407.89
Wilmington, N.C.*	1857	.....	43,897.44	" 1870.	8,917.70	.....	34,979.74
Galena, Ill.	1857	1861	48,797.58	" 1868.	6,321.08	.....	42,476.50
Port Angeles, Washington Territory.	.....	.....	.....	" 1868.	165.00		
Total	.....	.....	$3,304,704.80	.....	$424,173.67	$90,564.34	$581,354.51

* Never occupied as a Marine Hospital. Sold for $20,000, payable in five equal instalments; only two received. Possession is reported as having been re-taken by the United States in 1880.

The loss upon the hospitals whose account is given in the above table as settled is about five hundred and eighty-one thousand dollars, the gain, ninety thousand dollars: the loss on the whole series is, therefore, four hundred and ninety thousand dollars. The hospital at New Orleans, as we showed in a previous editorial, was offered for sale, and the highest bid received was nineteen thousand dollars: as this hospital cost five hundred and thirty thousand dollars, it is plain that over one million of dollars has been hopelessly sunk in experimental hospitals.

The nation is rich, and thoroughly used to being swindled, so the loss of this money will not disturb its night's rest; but there is another side to this question. The tax-payer may be wealthy and indifferent, but the man of the ocean is poor and powerless, and on him falls the burden of supporting those hospitals which have not been abandoned. When Jack was housed during sickness in the Pennsylvania Hospital and similar institutions, under the

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medical care of the leaders of the American profession, the compulsory tax which was collected from him at all our shipping ports for his care when actually disabled was twenty cents a month; but since he has had to support the dignity of a Supervising Surgeon-General and a corps of subordinate physicians it has been found necessary to double the tax, so that now the strong hand of the government collects from him not only the right and proper twenty cents a month, but filches also twenty cents additional to support the expensive array of hospitals not yet abandoned.

The civil physician did his hospital work faithfully for the love of it, but the doctor of the service must depend upon his salary, and naturally wants it as large as possible. A strong desire exists on the part of some persons of more or less political power and activity, to add to the duties of the Marine Hospital staff those pertaining to quarantine and sanitation. Is he of the sea to pay for this too? If so, the tax will soon rise to sixty cents. What ought to be done is to diminish the Marine Hospital staff to the minimum, by putting out of service all hospitals in places where civil hospitals exist, and rigidly limiting the duties of the medical staff within their legitimate scope, thereby making it possible to reduce the compulsory tax to its old figures.

FREE MEDICAL ADVICE.

COMMENTING on a paper recently published in our columns, the *New York Medical Record* editorially remarks,—

"The statement of Dr. Walk's, that Philadelphia has thirty-two dispensaries, is a surprising one. It places Philadelphia at once at the head of all the cities in the Union in the matter of these institutions. New York City, with a population one-third greater, has only twenty-two, and many of these do very little work. Nine dispensaries in this city treat nine-tenths of the patients. On the other hand, the actual amount of free dispensary service is about the same for both cities. In New York a quarter of a million of persons are treated at the dispensaries annually, which is one-fifth of our population."

There can be no doubt of the grave injury done by these institutions to the younger physicians of the city; and the rapid success of the Polyclinic shows that the supply grows with the demand,—*i.e.*, that when a physician wants to attend well-to-do people without pay he will find plenty of well-to-do people ready to be attended to. It does not appear that a new dispensary lessens the attendance upon the old institutions. We know that those who have gone from other dispensaries to the Polyclinic have not taken a clientèle with them, but have simply found a new mixed mass of poor and well-to-do thrifty Philadelphians who have learned that it is profitable to gratify skilful men who are eager for the present to work for nothing and find themselves, in the hope that, somehow, in the future such sowing of seed will yield harvest. Where this process of competition and pauperization is to end we do not know. We may yet live to see the supply of those desiring to receive medical charity not keep pace with the growing demand for clinical material, and placards carried up and down the street,—"Good news for the afflicted! Great attractions to the sufferers! Free Lunch and the Best Medical Skill! Excellent Breakfasts and the Best Professional Talent for the Afflicted!"

WE have received, from the West Philadelphia Medical Society, resolutions passed at a stated meeting, May 7, 1883, strongly condemnatory of the action of "certain mercenary men," in New York and elsewhere, to overthrow the present Code of Ethics of the American Medical Association.

LIGATURE OF THE INNOMINATE.—Mr. Mitchell Banks tied the innominate artery on February 28 at the Liverpool Royal Infirmary for aneurism of the second portion of the subclavian. A ligature was also placed on the common carotid. Mr. Girdlestone's kangaroo tendons were used, with strict antiseptic precautions. The patient recovered rapidly from the operation, and has already left the infirmary, with his aneurism much improved. —*Lancet.*

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NOTES FROM SPECIAL CORRESPONDENTS.

CHICAGO.

THE annual meeting of the Illinois State Medical Society was held during the past week, at Peoria. The attendance at any time was not very full, and during the closing days became quite slim. As a whole, the meeting was not up to the usual standard. Dr. Rauch, of the State Board of Health, read the draft of a bill to be introduced to the Legislature, having for its object the expurgation of quackery by forbidding advertising in the lay press. The doctor stated that the bill had already produced a good deal of excitement among a certain class, and that it was likely to meet with determined resistance, and would require the co-operation of the profession throughout the State to secure its passage. A committee of the State Society has already been before the Legislature, urging a change in our lunacy laws, and the substitution of a commission for our present trials of the insane in open court before a jury.

Apropos, recently a case of insanity was tried by a jury impanelled at the residence of the patient, the jury returning directly after to the court-room, there rendering a verdict in the usual way. The newspapers expressed great disgust at this innovation, and the sheriff has promised that it shall not be again permitted.

The County Commissioners have called upon two of the members of the County Hospital staff to resign, because of the determination of the doctors to operate upon a case where it had been decided in consultation that operative interference would certainly prove fatal.

About twenty-five ladies and gentlemen, members of the Society for the Promotion of Ethical Culture, held a meeting at the Leland Hotel for the purpose of completing an organization to supply the sick poor with suitable nurses. They have a good work before them, and appear determined to carry it to a satisfactory issue.

May 21, 1883.

CORRESPONDENCE.

LONDON LETTER.

THE Medical Bill appears to be making its way through the requisite steps essential to its becoming a law. It seems that the corporations die hard,—if they are dying at all,—and that a strong opposition is set up in quarters where such attitude was scarcely expected, as well as where it was looked for. The *British Medical Journal* expresses itself as follows: "The present aspect of affairs in connection with Medical Reform differs absolutely from all that has preceded it. The government and the profession are now, for the first time, united in an earnest effort to settle the long-agitated question, and to improve in the interest of the public the education, the attainments, and, above all, the examinations of candidates for medical practice, by the establishment of conjoint examining boards, formed by representatives of all the medical authorities existing in each division of the kingdom, under the supervision and control of one central Medical Council as the 'supreme medical authority,' exercising a general control over everything relating to medical licensing, and taking the necessary steps to insure equality in curriculum and examinations among the three divisional examining boards." The President of the Medical Council seems to think it would have been well if the bill proposed in 1870 had passed; but of this bill says the authority just quoted, "no one can now doubt that the withdrawal of the bill of 1870 was a fortunate event; for, under it, old and effete corporations would have been perpetuated, consecrated, and virtually embalmed; they would have continued to send to the Medical Council delegates directly commissioned to look after their individual interests, while new, vigorous, and growing bodies, like the Victoria University, Manchester, would have remained unrepresented. The correction of both these anomalies has now been provided for." Yet so little real faith exists in the profession giving the bill a fair trial, that it says, "It would be a boon to the profession, and to the public it would insure the working of the new Medical Act in all its integrity, if the noble Chairman of the Royal Commission, the Earl of Camperdown, who showed such thorough mastery of the subject during the discussion of the Medical Bill when passing through committee in the House of Lords, could be induced to fill the office of President of the new Medical Council, and, with his tact, knowledge, and courtesy, guide the deliberations not merely in the word but in the spirit of the recommendations of the Commission." So a noble earl has to be asked to preside over the deliberations of the Medical Council, to see that they are conducted fairly and honestly. It is quite clear that no number of the profession are to be trusted alone. Whatever odium I may have incurred, or hostility, in consequence of my outspoken remarks, nothing so severe as this has ever been written in these letters, from their commencement to the present time,—though some of the language used has occasionally been vigorous. There seems something curious and devilish about the influence exercised by these unhallowed corporations upon the medical men who come within the vortex of their selfish current. Honor, integrity, the sense of right, which characterize the leading members of the medical profession in their private

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life, seem to wither up in them in their official capacities connected with these ungodly corporations. As a contrast with what has been quoted above, it may be well to turn back to the *Lancet* for April 21, 1839, from which it will appear that the sanguine advocates of Medical Reform have been pressing on to victory for a considerable time,—over a generation,—while the doomed, detestable corporations have been hanging on to life with unfailing tenacity. This is what was written then: "It is difficult, in the present day, to keep pace with the progress of Medical Reform. Every week we have to announce the formation of an association, the appearance of a letter, the publication of a pamphlet, or the accession of a convert to the cause,—all more or less favorable to the establishment of liberal principles upon the ruins of the self-elective corporations. The day of action has come. Medical practitioners have a clear idea of their rights; and they now demand, with an ardor which cannot be suppressed, a control over their funds, the right of self-government which has been conceded to the municipal corporations, and the guarantee of privileges which have hitherto been but a delusive mockery. To sit tamely down under the *twenty-one* self-elective Councillors of Lincoln's Inn Fields, the Black Friars' Company, or the insolent Fellows of Pall-Mall, is felt to be an indelible disgrace." The first body named is the College of Surgeons; the second, the Apothecaries' Company; while the third refers to the College of Physicians in Pall-Mall, of which the same journal still despairs of any amendment. The trumpet-tones of this leader are echoing yet in the leader first quoted. "The indelible disgrace" has not yet been wiped off. There is an element of humor underlying this tall talk of our press. The week before the *Lancet* felt it was "difficult to keep pace with the progress of Medical Reform," it delivered itself as follows—and no doubt felt better for the accouchement—about the corporations: "As dissolution approaches, the mind often reverts to the past; and the eye of the good man brightens as it travels over his early struggles in the cause of righteousness,—over the evils which he has prevented, the sacrifices he has made, the happiness he has conferred, the seeds of good which he has scattered in the past to flourish and ripen in the future. It would be curious, if corporations have the same tendency to review their career as they draw near their latter end, to know with what feelings the medical corporations look back upon the deformity of their daily lives. How heart-thrilling must be the retrospect as they pass the long procession of evil deeds and iniquitous by-laws, the wrongs they have inflicted on teachers, the insults which they have offered to students, the good they have prevented, the obstacles which they have raised to the freedom and progress of science, the intense egotism with which they have watched over their own interests as individuals, the recklessness with which they have betrayed the interests of the profession and the public, the care with which they have extorted ticket-fees at the doors of the public charities, and the indifference with which they have seen quackery flourish, and the profession trodden down by the Penny-Club and Tender Poor-Law Commissioners, the sums which they have themselves appropriated, and the shabbiness with which they have left the BRITISH MEDICAL ASSOCIATION to bear all the expense of conducting the Poor-Law Inquiry before the committee of the House of Commons! But why call up the spectres? Corporations know no compunctious visitings; they have no consciences, and, as they live infamously without shame, die ignominiously without remorse."

Such was the language used in 1839. If Byron could say of the individual, "and in that moment o'er his soul winters of memory seemed to roll," it taxes the imagination to conjecture what immeasurable wastes of Arctic snows and ice must be presented to the eye of every one connected with these vicious corporations on taking its backward glance, as forty years and more of unrepented wickedness have, since this, passed over their heads. But perhaps no sense of imminent dissolution has caused any one to indulge in that retrospect so fiercely described by the then leading medical journal in 1839. It is quite clear that if strong language had any effect on corporations they must have been hammered to death long ago; yet they seem flourishing, full of life and vitality, still to be killed! That progress of Medical Reform, whose celerity in 1839 was so great that the *Lancet* despaired of keeping pace with it, and whose advent is yet being eagerly looked for, has been thwarted by want of real union within the medical body itself, whatever the professions which may have been trumpeted out.

When bodies hold their meetings *in camera* there is something going on of which they are ashamed, or on which they wish to individually hide themselves from outside indignation. Human nature courts no secrecy when it is really convinced of the uprightness and integrity of its conduct: it then welcomes the light of day. But when there is a crooked policy to be pursued, when the inward act is not to be in harmony with the outside profession, then the shelter of darkness is as desirable as is night for highway-robbery. If there be times when the deliberations may be concerned with private individuals, and it is felt that it might be well to keep the discussion to themselves, these must be few and far between; and it may be doubtful if it would not be as well for that individual and the world at large if it were publicly known what was said and who said it, even under those circumstances. If such occasions do at times

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arise,—and possibly they do,—the exception should not outweigh the rule. It would be far more satisfactory for all that what is said be uttered in the light of day, and then perhaps the backbiter, so confident with his assassin's dagger in the darkness, would be less unscrupulous; and the man who would slander in private would shrink from having his statements tested by the object of his infamous insinuations: the men who in private act in the interests of the corporations, to the exclusion of everything else, would find in publicity a check put upon the tongue which wags freely in the safety of secret conclaves. There must be men, or at least beings attired as men, who uphold the course of conduct so vigorously condemned in 1839, and quite as culpable yet, considering the language of to-day: only, who are they? Some very proper whited sepulchres, doubtless, if they could only be dragged into the light of day as they appear in the shrouded darkness of secret conclave. Concealment ever suggests that there is something to conceal. It is pitiful, too, to think that our leading journal, the mouth-piece of the huge British Medical Association, has openly to avow its want of faith in the members of our profession, in that it begs for an outsider to preside over the General Medical Council to prevent its thwarting the action of a bill recommended by a Royal Commission of Inquiry, and to see the law loyally carried out "in the spirit." Some of the hard words used about myself for my outspoken expressions of opinion in these signed letters would never have been uttered if there had been any prospect that the speaker would be confronted with myself and the world be asked to judge between us. It is the man who goes about to do evil in secret that is wanted by an outraged profession just as much as the leaders of the Irish assassins are at present wanted by the executive of the British government.

But to turn to a more agreeable topic. The suffering which has recently been experienced by our ruler—who has hitherto been blessed with the most redundant health—has been fraught with the recognition of the attention given to the alleviation of sickness and suffering, so apt to escape notice in the time of health and strength. The sprain has left behind it troublesome consequences, which are passing away slowly. Since her accident her Majesty has performed two gracious acts. The first is an order established for those engaged in the work of nursing, which often requires great devotion and self-sacrifice. Its name is "The Royal Red Cross," and it is to be bestowed on all ladies, English or other, who shall distinguish themselves in connection with those who are sick or injured belonging to the services; but not, as yet, apparently including any persons connected with civil hospitals,—a distinction which will probably soon be abolished. One matter characterizes this new order, and that is a provision by which the name of any recipient who afterwards is guilty of unworthy conduct may be erased from the register. It is an honor only to be held on good behavior. The precedent so made might be extended to other honors with advantage: if an honor confers distinction, the wearer should continue to live up to the honor. The second is the conferring of a baronetcy on T. Spencer Wells, the world-renowned ovariotomist,—a well-earned honor. What are the merits of the new baronet it is unnecessary to say here: his name is a household word through the civilized world. Sir T. Spencer Wells passed into the ranks of the profession in 1841, and was a surgeon in the Royal Navy. In the Crimean war he was surgeon to the civil hospitals. Long ago he wrote a small work on gout. He contributed to the press and to certain cyclopædic works a number of articles on general surgery. At last his attention was turned to the subject with which his name is inseparably connected. For long the operation for removing diseased ovaries was spoken about, from William Hunter downwards; at last McDowell, of Kentucky, made it *un fait accompli*. The first to perform the operation in Great Britain was Lizard, in 1823. After a lapse of twenty years, the subject was taken up by Dr. F. Bird, and for many years it had a checkered existence, and was by many denounced as an utterly unjustifiable operation. Then Clay, of Manchester, tried his hand; Tyler Smith and Baker Brown followed, and then Spencer Wells and T. Keith, of Edinburgh, took it up. It is with a smile that one now reads what Erichsen wrote in 1864, not yet twenty years ago: "Much discrepancy of opinion has existed amongst practitioners as to the propriety of performing this operation, which has been chiefly condemned on two grounds: first, that, as the disease for which it has been proposed is not necessarily fatal, or, at all events, not incompatible with long life, it is not proper to subject the patient to a hazardous procedure for its removal; and, second, that the mortality from the operation is so high as not to justify the surgeon in performing it." Of course he answered these questions by disposing of them: still, he evidently felt it necessary to entertain them, the operation not then being an accepted one. Now no one for a moment would attempt to urge either plea. The ovariotomist of to-day will smile further at the statement, "the mortality after ovariotomy appears to be increased by the existence of adhesions." It is the unilocular cyst floating freely in the abdominal cavity which now rather is feared. If the peritoneum has once been seared by inflammation, it does not readily inflame again: that is the lesson of ovariotomy. Of course, extensive adhesions, especially to the liver, may be such as to cause the operation to be

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abandoned. But, to speak broadly, the existence of adhesions, as testifying to the fact that the peritoneum has once been inflamed, is rather welcomed than otherwise by the ovariotomist. When Sir Spencer Wells took up the doubtful operation, he could have little surmised the success which was to crown his efforts,—the benefit humanity was to derive therefrom,-the lustre which was to surround his name. As he advanced, it was most cheering to find a greater and greater measure of success to wait upon an enlarging experience, to see how his percentage of recoveries steadily rose, until the operation once doubtful from the mortality it involved has been raised to the pinnacle of the safest of all the major operations. The time, the patience, the skill, the attention to details, which have rendered such success possible, equal the boldness, the true courage, which inspired him to encounter all the risks and dangers inseparable from the venture. Mankind, or rather womankind, owes a deep debt of gratitude to him; and the first lady in the land has shown her appreciation of his life-work, in the honor she has bestowed upon him,—the highest honor open to our profession. The art of slaughter, not the art of healing, is the road to high honors in Christian countries, while literature disdains all titular reward. Fancy Lord Oliver Wendell Holmes, or, rather, try to fancy it! Lord Lytton and Lord Macaulay gained titular honors by other means than literature. How the hearts of all the admirers of the Boston Professor on this side of the water—and their name is legion—warmed on reading the account of the banquet given to him! Long may he live to give himself exclusively to literature, to the large class he has in the outside world, a class for number and quality unequalled in this planet! The wisdom which lies so close alongside the fun, the practical application of the teachings of physiology, especially as to the hereditary transmission of mental traits as well as bodily characteristics, the subtile touch on the springs of action, all combined and blended together with an eloquent flow of language, form an intellectual feast without parallel. All that we now desire is to have the opportunity of seeing him as well as reading his inimitable works,—of hearing that voice which speaks so clearly at the breakfast-table, and which, doubtless, lost some of its wonted firmness when asking the schoolmistress if she would take the long walk with him. His works are a mine in which future authors will dig and delve industriously,—*i.e.*, if they wish to be in harmony with the spirit of to-day. The physiologist has got a mission for humanity, as clear as ever that of theologist or moralist; and, if he could only preach after the happy manner of the "Autocrat at the Breakfast-Table," how much better would humanity be in that goodness which comes of knowledge! Wisdom does not absolutely demand to be enshrined in a huge dry tome.

J. Milner Fothergill.

PROCEEDINGS OF SOCIETIES.

THE AMERICAN LARYNGOLOGICAL ASSOCIATION.

The Fifth Annual Congress of the American Laryngological Association convened May 21, 1883, in the city of New York; the sessions, which were held in the hall of the Academy of Medicine, continuing three days. Thirty-six Fellows of the Association attended the Congress, and a number of visitors were also present. George M. Lefferts, M.D., of New York, President of the Association, conducted the proceedings with dignity and decorum, and displayed great executive ability. The papers read were unusually numerous, and were uniformly of a high order, though sufficiently varied as regards their subjects.

In the President's annual address, the present prosperous condition of the Association was referred to, and the Fellows congratulated upon the vitality of the organization. For the first time in the history of the Association, its membership had attained the constitutional limit of fifty. In order to provide for others, who stand applying for admission, he suggested, instead of increasing the membership, that a pruning process be inaugurated, by which the few drones in the hive might be displaced and active workers admitted in their places.

Under the title *New Facts in Laryngology*, Dr. Lefferts considered a class of cases, of which he cited two instances, which had attracted but little attention.

Their clinical history was usually as follows. A strong, apparently healthy man, sitting at the table, is seized with a short cough, and falls to the ground, unconscious, but without muscular movements. Almost immediately he rises and resumes his conversation as if nothing had happened. Such attacks occur very rarely, but there are more frequently attacks of partial unconsciousness, always accompanied by the same paroxysmal cough. Even the worst attacks are not preceded by a cry, nor followed by confusion of ideas. Charcot has described such cases as laryngeal vertigo; Grey considers them as peculiar manifestations of epilepsy; Dr. Lefferts, from two instances which had come under his observation, was more inclined to regard them as epileptiform, with the *aura* commencing in the larynx.

In the discussion, Dr. Elsberg expressed the opinion that the cases were those of adductor spasm, such as Hack had reported. Dr. Knight suggested that the unconsciousness might be caused by the respiratory disturb-

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ance, in the same way that rapid breathing may cause it. Dr. Ingals noticed a resemblance between such cases and the temporary unconsciousness sometimes occurring in fatty degeneration of the heart.

A Common Form of Vocal Disability resulting from Pathological Processes was discussed in a communication read by Dr. S. W. Langmaid, of Boston. In professional singers the voice is sometimes found to fail uniformly at a certain point in the scale, while below this point it may be normal. This condition usually follows prolonged and excessive use of the voice, or it may happen as a result of sudden cessation of using the voice after its very active exercise. Examination of the larynx shows relaxation of the vocal bands, and the usual appearances of fatigue. The failure in singing the scale from below upwards occurs precisely at the point where the so-called change in the register occurs. The practice of falsetto upon these notes will eventually produce similar effects upon the larynx.

The Destruction of Nasal Polypi by Chromic Acid was advocated in a communication by Frank Donaldson, M.D., of Baltimore. The application of a paste of chromic acid he had found efficient in gelatinoid and adenomatous growth.

Chorea Laryngis was the subject of a paper by Dr. F. I. Knight, of Boston, in which cases were described which presented rhythmical movements of the palate and laryngeal muscles. Where the expiratory muscles are likewise affected, a barking cough is present. The coexistence of hysteria, general chorea, or the neurotic temperament would confirm rather than invalidate this diagnosis.

The Treatment of Laryngeal Phthisis, by Dr. E. Fletcher Ingals, of Chicago, and *The Healing of Ulcers in Laryngeal Phthisis*, by Dr. William C. Jarvis, of New York, both advocated local treatment, and cited cases where improvement had resulted, so that the patient could swallow his food with comparative comfort, and was free from pain: in some the ulcers entirely healed. The treatment was by sprays, applications to the ulcers of astringents, and the use of iodoform and other powders. Patients' lives may be prolonged, and certainly made more comfortable, by treatment, and in some cases they may entirely recover,—especially if a change of climate be made.

Paresis of the Constrictor Muscles of the Pharynx, simulating Spasmodic Stricture of the Œsophagus, was communicated, with reports of cases, by Dr. Frank H. Bosworth, of New York, who considered them to be myopathic and independent of any neurotic element.

Dr. J. Solis Cohen regarded the disorder as hysterical; but Dr. Bosworth believed that the existence of a certain amount of sluggishness observed in the muscles under mechanical and electrical stimulation would separate these cases from hysteria.

Photographing the Larynx was the subject of a lecture, accompanied by photographs of the living human larynx, by Dr. I. R. French, of Brooklyn. It was shown that photography might be made available for the study of the larynx, in both normal and pathological conditions. A camera was shown, which could be held in the hand, and by which instantaneous photographs could be taken, even without the knowledge of the patient. Photographs of the rhinoscopic image were also shown.

Congenital Tumors of the Larynx, with a report of five cases, was, in the absence of its author, Dr. H. A. Johnson, of Chicago, read by Dr. J. N. Mackenzie, of Baltimore. The growths were papillomatous, and, occurring early in life, were liable to be mistaken for croup, and might lead to suffocation unless tracheotomy was performed or thyrotomy done, and the growths removed.

In the discussion which was had upon this paper, a number of cases of a similar kind were reported.

Reflex Phenomena due to Nasal Disease were considered by Dr. Louis Elsberg, of New York, in which a wide range of symptoms were reported as having been relieved by attention to the accompanying nasal disorder. Among these are cough, melancholia, chorea, reflex epilepsy, neuralgia, gastric disturbance, uterine disorders and affections of the mucous membrane of the genito-urinary tract, pain and disturbances of special senses, vocal difficulties, glottic spasm, and bronchial asthma. He cited a peculiar instance of disease of the nasal passages, in which coitus always excited a violent attack of sneezing.

Smell, Hygienically and Medico-legally Considered, was read by Dr. Clinton Wagner, of New York.

Asymmetry of the Nasal Chambers without Septal Deviation was brought up for discussion by Dr. Harrison Allen, of Philadelphia. He had made an examination of a number of skulls, and had found that in the bony structures there commonly exists a want of symmetry between the two nasal chambers, apparently occurring quite independently of the condition of the septum. He concluded that obstruction in one nostril might thus exist from congenital causes, the nasal septum not being deviated, and consequently not admitting of relief by ordinary operations upon the septum. The difference between the nasal chambers is most marked in idiots, in whom asymmetry of the development of the skull is also seen, especially in the cerebral fossæ.

The Results of Treatment of Naso-Pharyngeal Polypi was ably treated in a paper by Dr. Rufus P. Lincoln, of New York, which contained a table of seventy-four operations by different surgeons, showing the relative mortality from different methods of treatment.

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Three cases were reported treated successfully by Dr. Lincoln with the galvano-cautery écraseur. This method was advocated in preference to the ordinary surgical procedure of removal of part of the maxilla, which is more difficult, dangerous, and deforming; the operation is so severe that about one-third of the cases die. During the discussion on this paper a number of other successful cases were reported from the method practised by Dr. Lincoln.

An Illuminating Apparatus for Examining the Upper Air-Passages was shown by Dr. E. Holden, of Newark, which consisted of a small Edison lamp in a closed glass tube which could be introduced into the mouth. The apparatus was not yet perfect, but it promised to become useful.

A Case of Thyrotomy for Morbid Growth, with subsequent development of epithelioma in the cutaneous cicatrix, but without involvement of the interior of the larynx. This patient was sent to Dr. Cohen (who reported the case) from Delaware, with a laryngeal growth on the right vocal cord and ventricle, a portion of which was removed and pronounced a papilloma. He was 63 years of age; thyrotomy was performed, and the tumor was extirpated. Two years later the scar-tissue was attacked by epithelioma, which spread on the cutaneous surface but did not involve the larynx; during this period the larynx remained healthy, and the voice, which had been regained soon after the operation, continued strong. The patient thought that the ulceration was caused by the rubbing of the collar against it, although it had been worn loose on purpose to avoid such irritation. The patient died of exhaustion six months later. This appeared to be a case of malignant disease from local irritation of a cicatrix.

Some Experimental Researches on the Tension of the Vocal Bands, made in the physiological laboratory of Harvard Medical School, were reported by Dr. F. H. Hooper, of Boston. The action of the crico-thyroid muscle, and the effects of the expiratory blast of air, were the special topics investigated by Dr. Hooper in conjunction with Prof. Henry P. Bowditch. The function of the muscle is not to tilt the thyroid downward and forward upon the cricoid, but the experiments conclusively proved that its action is to draw the cricoid cartilage forcibly upward on to the thyroid, the latter being the fixed point: the name, therefore, should be *thyro-cricoid*, instead of crico-thyroid. The expiratory blast of air acts as a tensor of the vocal cords, not merely by a direct action upon these structures, but also by causing a lifting of the cricoid cartilage on to the thyroid. He concluded that "(1) The cricoid cartilage is the most movable part of the laryngo-tracheal tract. (2) The thyro-cricoid muscle, according to its physiological action, should be described as arising from the thyroid cartilage, and inserted into, and giving motion to, the cricoid. (3) The air-blast, in virtue of the mechanism set forth, is a direct and important longitudinal tensor of the vocal bands."

Aural Complications of Inflammatory Conditions of the Nose and Throat were considered in a paper by Beverley Robinson, M.D., of New York, in which the agency of diseases of the upper air-passages in determining ear-affections, and the importance of recognizing this connection in treating aural disease, were discussed and illustrated.

The Lacunæ Tonsillarum was the title of a paper by Dr. D. Bryson Delavan, of New York. The anatomical structure of the crypts of the tonsils, caused by involutions of the mucous surface, shows the importance of making applications to their interior, and not simply confining them to the general surface of the tonsil in cases of disease of this organ. Dr. Delavan advised first cleaning the crypts with absorbent cotton and then applying the astringent or caustic by means of a probe. A small splinter of wood dipped in fused nitrate of silver is convenient for use in this way, as it can easily be held in the forceps, and thrown away after it is used.

The Value of Post-Laryngeal Papillomata as a Means of Diagnosis of Tubercular Disease was urged by Dr. G. W. Major, of Montreal, Canada. Attention was also directed to the velvety condition of the mucous membrane of the larynx, especially the inter-arytenoid fold and posterior commissure; but papillomatous growths occurring early in the disease were considered characteristic of tuberculosis.

A Case of Enormous Tumor removed from the Glosso-Epiglottic Sinus was reported by Dr. E. C. Morgan, of Washington, D.C. The tumor was an immense myxo-sarcoma, nearly filling up the posterior portion of the mouth, threatening suffocation, and greatly interfering with deglutition; it had a narrow pedicle, and was removed simply with the fingers, being twisted until it was separated from its base, and was drawn out of the patient's mouth without instrumental aid.

A Case of Sudden Death after Tracheotomy was reported by Dr. Morris J. Asch, of New York. The patient had tracheotomy performed for paralysis of the adductor muscles of the larynx, which threatened suffocation. On the fourth day after the operation, although he had been doing very well, he suddenly died while the physician was making his visit. At the autopsy no organic cause for death—except a heart-clot—was discovered, and the conclusion was reached that he died of syncope or fright, as he had been greatly alarmed about his condition.

Adhesion of the Velum to the Walls of the Pharynx was the subject of a paper by Dr. Andrew H. Smith, of New York, who presented a case of almost complete occlusion of the cavity of the naso-pharynx from that of the mouth, due to syphilitic ulceration.

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NEW REMEDIES.

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Manufacturing Chemists,

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The remedies whose action is directly diaphoretic are so few that any additions to those which have heretofore been classified as possessing this property are of more comparative value than additions under the other heads covering the classification of drugs. This poverty of diaphoretics is the most convincing argument for a thorough trial of such of the following drugs as have not as yet become thoroughly known.

JABORANDI.

(Pilocarpus Pennatifolius.)

This Brazilian drug, though but a comparatively recent introduction to the materia medica, is already so well known as to render a consideration of its properties scarcely less necessary than would be a consideration of those of opium or any of the other standard drugs. It is, *par excellence*, the diaphoretic of the materia medica. We desire more especially in this place to ask attention to our preparations of it —the fluid and the solid extracts. We vouch for the conformity of these to the recognized standard of active principle. Our experience in the matter of new drugs has taught us the necessity of unusual care in the selection of the crude drug for pharmaceutical preparations. The liability to deception in these is, through the limited familiarity with their peculiarities on the part of both physicians and pharmacists, incomparably greater than in the case of old and standard drugs, and the newer introductions to the materia medica have not infrequently been made to suffer disrepute through this cause. In the case of Jaborandi, as in that of all the other newer remedies, the specification ("P., D. & Co.") on the physician's prescription will insure a preparation of full physiological activity.

SIERRA SALVIA.

(Artemisia Frigida.)

Although this drug is also classified as a diuretic, it is likewise, in conformity to a well-known physiological law, when the surface is kept warm, a diaphoretic. Illustrations of this dual action of drugs are furnished in the case of other diaphoretics, as, for instance, sweet spirit of nitre, etc., which act on the kidneys or the skin accordingly as the latter is kept warm or cool. Given in the form of a warm infusion, and with the patient's surface kept properly warm, Sierra Salvia is an active diaphoretic, and is especially indicated in the case of the eruptive fevers. Its diaphoretic action is notably more decided than that of any of the warm vegetable infusions popularly employed.

ELEPHANT'S FOOT.

(Elephantopus Tomentosus.)

Elephantopus Tomentosus is a drug of whose direct diaphoretic properties we are not yet fully assured by any considerable number of reports. We submit it on the authority of Dr. Newlon, of Kansas, who speaks warmly in its behalf. We solicit for it that thorough trial which is necessary to fix its place in the materia medica.

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Unlike the various substitutes which, in some cases, are but unscientific or incompatible compounds, forced upon the Medical Profession as aids to digestion by extensive advertising, but which, when submitted to the proper tests, are found to be almost useless as digestive agents, Pepsine is constantly gaining in the esteem of the careful practitioner.

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In answer to frequent calls, another preparation is now offered,

BOUDAULT'S SACCHARATED PEPSINE,

having the same high digestive power as the amylaceous; it will be sent only when specified.

Boudault's Pepsine is sold in bottles of 1 ounce, with a measure containing exactly 5 grains; also in bottles of 4, 8, and 16 ounces for dispensing.

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Besides Boudault's Pepsine in powder, we offer also

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In this preparation the taste of Pepsine being perfectly disguised, it may be recommended to persons who have difficulty in taking Pepsine in the form of powder.

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"The experiments made in the hospitals of Paris have demonstrated that *Dr. Rabuteau's Dragees, Elixir, and Syrup* regenerate the red globules of the blood with a rapidity never observed with the use of the other ferruginous preparations. These results have been proved by the various *Compt-Globules.*

"The ferruginous preparations of *Dr. Rabuteau* do not cause any constipation, and are perfectly tolerated by the weakest persons."—*Gazette des Hôpitaux.*

Dr. Rabuteau's Elixir is prescribed when some difficulty is experienced in swallowing the Dragees; it is especially adapted to weak persons whose digestive functions need strengthening or stimulating.

Dr. Rabuteau's Syrup is especially prepared for children, who take it readily because of its agreeable taste.

A sample of Rabuteau's Dragees will be sent free to any physician mentioning THE MEDICAL TIMES.

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FOR THE TREATMENT OF TAPE-WORM (TÆNIA SOLIUM).

This New Tæniafuge, the active alkaloid of Pomegranate Bark, has of late come into extensive use in France for the treatment of Tape-Worm (Tænia Solium). The results of numerous experiments with it at the Marine Hospitals of Toulon, St. Mandrier, etc., and in the Hospitals of Paris, St. Antoine, La Charité, Necker, Beaujon, etc., have all been most satisfactory. Dr. Dujardin-Beaumetz, Member of the Academy of Medicine, and Prof. Laboulbène, in their report to the Society of Therapeutics, have given it their unqualified approval after the most searching experiments. This preparation is pleasant to administer, and, if certain preliminaries are observed, success will be insured. Pelletierine is prepared by

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A COMBINATION UNITING THE PROPERTIES OF

ALCOHOLIC STIMULANTS AND RAW MEAT.

This preparation, which has been used with great success in the hospitals of Paris since 1868, is adapted to the treatment of all diseases requiring the administration, in a small volume, of a tonic able to stimulate and support the vital forces, as *Pulmonary Phthisis, Depression and Nervous Debility, Adynamia, Malarious Cachexia, etc.*

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Cases were also exhibited by Dr. Jarvis, Dr. Lincoln, and others. Instruments were shown by Drs. Jarvis and De Blois.

At the business session the following resolutions were adopted, on motion of Dr. Morgan, of Washington:

"*Whereas*, This Association observes that a bill reported in the last session of Congress, by the Committee on Public Buildings, recommending the erection of a fire-proof building in which to place the Library and Museum of the Surgeon-General's Office, failed to become law, and in view of the signal utility and value to its members, as well as to the medical profession generally, of the unequalled collection of books forming the Library, it is therefore

"*Resolved*, That the American Laryngological Association regards it as a clear duty of the Forty-Eighth Congress to make the necessary appropriation for the erection of a fire-proof building to contain the treasures in question, which, if destroyed, would be absolutely irreplaceable.

"*Resolved*, That Congress should be urged to make an annual appropriation sufficient for the purchase of all new books pertaining to medicine, and to authorize the completion of the Index Catalogue, for the benefit of the medical profession of the United States.

"*Resolved*, That, in the opinion of the Association, the Library and Museum should under no circumstances be dissevered, and should be kept under the same management that has made them what they are.

"*Resolved*, That we pledge ourselves, individually, to make these views known to Senators and Members of Congress, as far as we are able."

A copy of these resolutions, signed by the officers of the Association, was directed to be sent to each House of Congress at its coming session.

The reports of the Secretary, Treasurer, Librarian, and Auditing Committee, also of Committees on Nomenclature, on Diploma, and on Seal, were all made in private session.

Two resident Fellows were elected at this meeting,—W. C. Chamberlain, M.D., of Hartford, Connecticut, and John N. Mackenzie, of Baltimore, Maryland,—both of whom were present.

The annual dinner of the Association was given at Delmonico's, at the close of the first day's session; and the President, Dr. Lefferts, entertained the Association by a theatre-party and a supper at Delmonico's on the following evening.

OFFICERS FOR 1883–84.

The following names were presented by the nominating committee, and unanimously elected:

President.—Frank H. Bosworth, M.D., of New York.

Vice-Presidents.—S. W. Langmaid, M.D., of Boston, and S. Johnston, M.D., of Baltimore.

Secretary and Treasurer.—D. Bryson Delavan, M.D., of New York.

Council.—Andrew H. Smith, M.D., of New York, Harrison Allen, M.D., of Philadelphia, Morris J. Asch, M.D., of New York, and Beverley Robinson, M.D., of New York.

The Association adjourned, to meet on the third Monday in May, 1884, in New York City.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

STATED MEETING, THURSDAY, May 3, 1883.

The President, R. A. CLEEMANN, M.D., in the chair.

DR. WILLIAM GOODELL related the history of

THREE STUBBORN CASES OF VESICO-VAGINAL FISTULÆ SUCCESSFULLY TREATED AFTER THE OPERATION WITHOUT THE USE OF THE CATHETER.

The first one, after a non-instrumental labor lasting from a Tuesday evening, when the membranes broke, to a Friday night, found that her urine dribbled away immediately after the birth of the child. The fistula was situated so close to the cervix as to implicate it, and was quite large. Sixteen months after the accident she was operated on by a distinguished surgeon, whose success in uro-genital fistulæ is very great. He turned the cervix into the bladder, and successfully cleared up all the rent save a small portion of it. On this fistula he operated three times, without any union whatever. In each instance the urine dribbled away before the stitches were removed, and on two occasions an alarming hemorrhage came per vaginam. This information Dr. Goodell obtained from the surgeon himself.

Early in 1877 Dr. Goodell operated on her at the Hospital of the University of Pennsylvania, and put in Sims's self-retaining catheter. Eight sutures were needed to close the opening. The next day a hemorrhage from the bladder, possibly menstrual, took place, and lasted several days. A fever also set in, which gave some alarm. When the stitches were removed, very little union was found to have taken place. Four months later, Dr. Goodell operated for the second time, and, thinking that the vesical hemorrhage in the preceding operation was caused by the irritation of the self-retaining catheter, he treated her without one. The first twenty-four hours her urine was drawn off every four hours, but afterwards she was allowed to pass it herself. No hemorrhage occurred, and perfect union took place.

The second case was also one of tedious

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labor in which the forceps were not used. The fistula at first was a very large one, and was most skilfully closed by an excellent surgeon. A very small fistula, however, remained at each angle of the wound. These defied repeated operations on his part, and the case finally drifted into Dr. Goodell's hands. Twice the latter operated at his private hospital on these fistulæ, using the Goodman self-retaining catheter, but each time vesical and uterine tenesmus set in, and the result was a failure. Both fistulæ were then burned with the actual cautery, and one of them closed up, but the larger one resisted this treatment, as well as that by nitric acid. He then operated upon it a month ago for the third time, dispensing with the use of the catheter. The lady was instructed to pass her water before the desire became urgent. Neither vesical nor uterine tenesmus occurred. The stitches were left in for fourteen days, and union was complete.

The third case was the result of a short labor, and the cause of the fistula is obscure, as the lady was attended by a midwife who pulled and tugged away at something after the birth of the child. The late Dr. H. Lenox Hodge had operated five times upon it, closing all but a small fistula which lay at the junction of the neck of the bladder with the urethra. Dr. Goodell closed this fistula at the Hospital of the University three weeks ago with eight stitches, and, fearing that the catheter would interfere with union, dispensed wholly with it. The success was complete.

From these cases, and from others which he had met with, Dr. Goodell was led to think that the catheter might, as a source of irritation, oftener be dispensed with very advantageously in the treatment of these fistulæ. He cited the practice of the late Dr. Simon, of Heidelberg, who was a very successful operator and yet rarely resorted to its use. He also called attention to the fact that in these cases, and in the very great majority of the cases he had met with, the forceps had not been resorted to, showing that it was not the use of that instrument, but its neglect or the delay in its use, that caused the mischief. In fact, he could not recall a case in which the lesion could be attributed to instrumental delivery. In the general experience of surgeons, very small vesico-vaginal fistulæ were harder to cure than moderate-sized ones. One reason for this is attributable to the fact that they usually are found in sites difficult to reach; and another, that the operator is unwilling to enlarge the small opening by bold incisions, and fails from too small a denuded surface. Including the one previously referred to, he had closed two of them by means of the actual cautery.

Dr. ALBERT H. SMITH remarked that these cases were of great interest. He had been taken by surprise when Dr. Simon announced his plan of treatment without the catheter, as he had been afraid of the strain on the stitches resulting from the accumulation of urine in the bladder. The presence of the self-retaining catheter must necessarily be a source of irritation and vesical tenesmus. The small holes in its bulb may become occluded by mucus, or clot, and then it would act as a plug instead of a drain. In those cases in which the loss of substance in the vesico-vaginal septum has been very great and the mucous surface of the bladder has been prolapsed into the vagina, the capacity of the bladder becomes small, and it must be emptied frequently, or the tension on the stitches becomes too great.

He had been gradually led to the conclusion that it would be better not to use the catheter after trachelorrhaphy and perineorrhaphy unless called for by special circumstances. There are cases in which, in consequence of mental influence or the effect of position, the patient cannot pass her water for weeks after labor, in which no injury or long or undue pressure has occurred.

Dr. R. P. HARRIS had recently operated for the restoration of a very long perineum: the last stitch was almost on a line with the orifice of the urethra, and the nurse was not able to introduce the catheter. He placed the patient in a sitting position to pass her water, and used a male catheter tied on the tube of a Davidson syringe to wash out the vagina.

Dr. GOODELL is by no means a convert to treatment in this class of cases without the employment of the catheter; for he had been too successful with it. He prefers the Goodman modification of the Skene self-retaining instrument, but he always makes certain that it did not impinge on the wound. He has recognized the influence of mind and of position on the ability to pass water, and he thinks the use of ergot, so general before the third stage of labor, is one cause of the difficulty, as it is quite possible that it may cause a spasm of the urethral constricting fibres. He would like to dispense with the use of both catheter and syringe after perineorrhaphy, as he has found injuries to the anterior angle of the wound by the syringe and the fingers of the nurse while introducing the catheter. He has been in the habit of putting one stitch through the sound skin above the denuded surfaces, to prevent this injury. In one case, recently, the Goodman catheter slipped out twenty-four hours after perineorrhaphy, and he did not replace it, the wound healing. He always uses the catheter after trachelorrhaphy.

Dr. WILLIAM GOODELL also exhibited

TWO OVARIAN TUMORS, ONE OF THEM OF DOUBTFUL CHARACTER.

The one of doubtful character was removed from an unmarried woman, aged 27, who had not menstruated for over a year. It was first

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discovered nine years ago, but gave no trouble until two and a half years ago, when ascites set in. She had been tapped fourteen times when Dr. Goodell first saw her. She was very thin, pale, and so weak as to keep her bed. He recognized a hard tumor floating in the ascitic fluid, giving the feeling of ballottement, and diagnosticated it as either a solid ovarian tumor or a pedunculated fibroid.

On the 18th of last April he removed it, at the University Hospital, and found it to be a hard, solid, nodular tumor of the right ovary, with evidences of papillomatous degeneration. It had merely omental adhesions, and had a long, slender pedicle, twisted many times on its axis. It was evident that the ascitic fluid was secreted directly from the tumor, and did not come from pressure on abdominal veins or from irritation of the peritoneum.

The other cyst was removed also at the Hospital of the University, and on the same day, from a married woman, aged 26, who noticed it two months after her marriage, and about four months ago. The cyst was as large as the adult head, and was apparently attached to the womb, which was drawn upward and gave a measurement of four inches. It was operated on early because it caused great vesical disturbance. The lower portion of the cyst was found enveloped in the broad ligament, close up to the womb, and had to be enucleated. It was this condition that gave the symptoms of uterine attachment.

The cyst was that of the left ovary, but, as the right ovary also presented tokens of degeneration, it was also removed. Both women recovered promptly, although the first one had, on the third day, a severe attack of mumps, which appears to be prevailing in this city as an epidemic. The ascitic fluid, which was straw-colored and syrupy, was not examined microscopically.

Dr. M. O'HARA wished to know how Dr. Goodell could decide quickly between mumps and septic parotitis. He also spoke of the reflex action of the sexual organs, as shown by the frequent occurrence of salivation during pregnancy. In a recent case of cancer of the rectum the first symptom observed was excessive secretion of saliva.

Dr. ALBERT H. SMITH remarked that mumps was a very interesting and very perplexing disease. He had seen cases of extension of the disease without retrocession in adult women to mastitis and ovaritis, the swelling of the parotid gland being rapidly followed by the involvement of the sexual glands, the inflammation of the ovaries being accompanied by local peritonitis. A singular question was raised by the case of a young man who went to Florida directly after marriage, and on the return-trip by sea experienced a severe attack of mumps: it was complicated by orchitis, the inflammation being of high grade, with great increase of temperature and rapid pulse. No atrophy of the testicle has occurred, but the union has been sterile, and there is no known fault on the part of the wife. The semen has not been examined microscopically to ascertain the presence of spermatozoids. The mastitis accompanying mumps has never, in Dr. Smith's experience, run into suppuration, but is accompanied by febrile action of a high grade. He has seen the ovary the original point of attack, the inflammation of the mammary gland being later. It is a marvel of pathology that this disease, which affects in childhood the salivary glands only, should in adult life affect the sexual glands also. He has never seen a case of atrophy of the testicles following mumps.

Dr. GOODELL recognized mumps in this case by his experience in two previous cases of mumps with severe symptoms in adults. The pulse does not become so frequent as in septicæmia, and the eye remains clear and does not acquire that glassy appearance so indicative of a fatal issue. Dr. Goodell has never seen the involvement of the breast and ovary. A peculiar relation between the sexual organs and the glands of the neck is shown by the habit of a Roman matron, who measured the throat of her daughter before and after the marriage-night, to ascertain if the young husband had properly performed his marital duties and if they had been properly received.

Dr. ALBERT H. SMITH exhibited a set of hard-rubber

URETHRAL DILATORS.

The set consists of ten pieces, with two handles into which they can be screwed; the smallest bougie is twenty millimetres in circumference at the point and twenty-eight millimetres at the largest part, the tapering in each bougie being eight millimetres, and a difference of six millimetres between each one and the largest circumference of the next in the scale. The largest one is eighty-two millimetres at the largest part, and would be useful as a rectal dilator. He had been very much surprised at a statement made by Dr. Emmett at the last meeting of the Gynæcological Society in Boston, that dilatation of the urethra almost universally causes laceration and is followed by permanent incontinence of urine. Dr. Smith has been in the habit of doing it frequently and fearlessly, without hesitation, not only in diseases of the urethra and bladder, but for exploratory purposes, and for the removal of stone, and also as a step in the operation of anterior elytrorrhaphy, that by means of a finger in the bladder he may judge of the thickness of the walls in denuding the vaginal surface, and place his sutures satisfactorily. He has never had incontinence of urine to last over twenty-four hours from this procedure.

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Dr. R. P. HARRIS had seen a large number of dilatations of the urethra without any bad effect. He would consider the method of Dr. Smith better than any other plan, as it would make a perfectly even and uniform pressure on every portion of the urethra, with a very gradual action, free from the dangers incident to the opening of any form of instrument with blades.

Dr. GOODELL was much obliged to Dr. Smith for exhibiting these instruments, and would get a set of them. He has entirely dropped Simon's dilators, and has for some time been using his little finger as the best dilator. He has not had any trouble from laceration or incontinence. In one case, in which he resorted to dilatation and treatment to the mucous surface of the bladder as a cure for cystitis following labor, incontinence remained for a long time, but gradually disappeared. He knew of laceration and incontinence in two instances resulting from the use of the thumb as a dilator. Dilatation alone is a good treatment for many cases of irritable bladder.

Dr. WILLIAM H. PARISH narrated the case of a widow operated on by Dr. Goodell by dilatation, for the relief of a very aggravated case of irritable bladder, the result of a gonorrhœa contracted years before from her husband, and which had been followed by cystitis. It was greatly relieved for several months, but not cured, by dilatation; but the relief was only temporary. The patient passed under the care of Dr. H. Lenox Hodge, who cauterized the urethra by means of Paquelin's cautery. In consequence of the illness and death of Dr. Hodge, she came again under the care of Dr. Parish, who commenced treatment by the injection of a solution of nitrate of silver, very strong at first, but weaker on subsequent applications. The trouble has passed entirely away. There are two causes of fissure in dilatation: the first is, too rapid expansion of the dilator; the second, changes in the mucous membrane, as from inflammatory action, particularly if caused by gonorrhœal poison.

Dr. CHARLES H. THOMAS had lately procured a set of nickel-steel instruments of about the same taper and for the same purpose as those exhibited by Dr. Smith. The set consisted of sixteen pieces; there were one and a half millimetres as the scale, and each dilator tapered five millimetres from the point to the largest circumference of the shank; they ranged from twenty-five to fifty millimetres. He has tried in some cases using every second instrument, making rises of three millimetres, but has found that the pain was increased by so doing. He has never known of a case of incontinence caused by dilatation, but has heard of such from the hands of two celebrated surgeons of this city. He thinks dilatation to the size of the finger a good treatment for the relief of irritable bladder in connection with irritation of the urethra and neck of the bladder. He related the history of two cases in which this condition was complicated and made persistent by sphincterismus of the sphincter-ani muscle; dilatation of the urethra in these cases, although a benefit, did not cure the trouble; but when to this was added dilatation of the sphincter ani, so that two fingers could be introduced back to back and a good dilatation secured, the cases were permanently cured.

Dr. B. F. BAER has practised dilatation of the female urethra a number of times, and has had no instance of continued incontinence. He would, however, question the propriety of ever using a large-sized dilator, except for the purpose of removing a calculus from the bladder; and even in that case he thought it might be better to allow the stone in the grasp of the forceps to finish the dilatation than to use mechanical dilators to secure the full extent needed. In one instance, incontinence lasted several weeks after dilatation, but final recovery was complete, solutions of carbolic acid having been applied in the mean time for the cure of an irritability of the bladder and urethra.

Dr. PARISH would like to hear from Dr. Smith respecting the indications for probable success in treatment by dilatation of the urethra for the relief of irritation of the bladder.

Dr. SMITH, in reply to Dr. Baer, remarked that no canal of the body should ever be dilated beyond the actual necessities of the case; such a principle is unquestionable; but no form of dilator could be worse than the irregularities and roughness of a calculus, increased in size as it would be by the grasping forceps, which would present but two points of contact with the urethra and render laceration quite probable. In a patient recently under his care he had reason to suspect the existence of papillomatous growths on the mucous surface of the bladder; he dilated the urethra, using the largest size of Simon's dilators and completing with a Molesworth's dilator expanded very slowly. He was able to evert the bladder through the urethra, and removed the vegetations by means of scissors. There was no laceration or incontinence resulting from this procedure. The danger is in too great haste. In reply to Dr. Parish, he said that dilatation is usually resorted to for exploratory purposes, removal of stone, growths on the vesical wall, or to ascertain the thickness of the wall of the bladder, and to introduce a finger into that viscus to guide the sutures in plastic operations upon the vagina. Irritability of the neck of the bladder can generally be relieved by dilatation, but it sometimes fails to cure. Dr. Smith prefers hard rubber to plated metal as the material for the dilators; it is lighter in weight, is not liable to corrosion, and is more easily kept clean. He

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thinks the multiplicity of instruments in Dr. Thomas's scale a disadvantage, and that time is lost and irritation caused by introducing several instruments in place of allowing one to remain a longer interval.

REVIEWS AND BOOK NOTICES.

HYGIENIC AND SANATIVE MEASURES FOR CHRONIC CATARRHAL INFLAMMATION OF THE NOSE, THROAT, AND EARS. Sixteen Illustrations. Second Edition. By THOMAS F. RUMBOLD, M.D., etc. St. Louis, Medical Journal Publishing Company, 1882.

The preface to the second edition tells us that an author is pleased by the rapid sale of his works, that the treatise before us occupies new ground and advances novel themes, that no attempt has been made to exhaust any one subject, that the author is very certain that hygienic and sanative measures are the most successful remedies against catarrh, and that catarrh is the original cause of many diseases not generally traced to it, and especially of mental disease, "there being few severely-affected catarrhal patients whose minds are not to some degree affected."

Now, some one has advanced the rough statistical statement that in the United States alone there are about ten million sufferers from catarrh, and the religious press has for many years teemed with "catarrh cures," read with open-mouthed interest on quiet Sunday afternoons in New-England villages and Western frontier towns, till the name of catarrh has become blended in the mind with one or another form of religious belief, and the catarrh cures eagerly embraced as emanating from a religious fountain, and, ignominiously failing, have threatened in their own fall to undermine the very foundations of the faith. The popular idea of catarrh differs also somewhat from the medical, and approaches much more nearly to ozæna; but the catarrh of the ten millions can scarcely be considered as a true disease, but rather as the effect upon the average nasal membrane of climatic causes, heat and cold, dryness and moisture, too rapidly alternating and too excessive for the average nasal membrane to resist successfully. The nose that is catarrhal at Boston may be healthy in Philadelphia, or may suffer severely here and be cured by a sojourn in the Southern States. Whether our noses are growing weaker with each generation in Northern America, or whether the climate be too much for any nose to stand, is a question we leave to others; though Europeans arriving in our midst are often rapidly attacked.

The author thinks that constant violation of the laws of health is one great reason for our catarrh. Oft-repeated colds, he says, leading to it, "let us avoid oft-repeated colds." Here we have the hygienic measure in a nutshell. But how to avoid them? how, when business must be carried on, when open-air exercise must be taken, can we avoid contracting colds in a climate where a fall of forty degrees in a day is nothing uncommon? The author answers, clothes. This is one way; but his idea of hygiene in catarrh is so far-reaching and extensive that it is possible that he himself fails to foresee its great value to the patient and the community, for among the provoking causes of the disease are errors of temper, an irritable disposition,—and here he invades the domain of religion and morality, with which, as we have hinted, catarrh is closely connected,—the use of tobacco, abstinence from which threatens the cuspador industry, diseased gums and teeth, stimulating the business of the dental practitioners; and, unless all these matters are attended to, "the disease cannot be controlled by either a local or constitutional treatment." And the treatment, when successful, with all the assistance the patient can render, takes many months, and the hygienic measures must be continued for years afterwards, or "so long as there is a susceptibility to take cold;" in short, till cold takes us to its deadly embrace.

And, first, the author would oblige us to concede "that every individual who has been in the habit of taking cold in the head has catarrh" already, and, as almost every one is in the habit of taking cold, he would ask us to admit that almost every one in the community has catarrh and is a fit subject for his hygienic local measures, thereby affording us a glimpse of the wide field which he proposes to cultivate,—a field of almost the whole population of the Northern American States: so that, all moral and physical hygienic measures, including abstinence from tobacco, being necessary for cure, and the entire community needing the cure, catarrh and its cure threaten in his hands to become the great religion of the future,—a sort of catarrhal-army movement, by which men, for fear of catarrh, present and to come, will lead virtuous, continent lives, eat and drink properly and soberly, avoid tobacco and hurtful stimulants, keep their tempers in restraint, avoid hardness and cruelty to others lest they cause them to have catarrh, and, in short, life will become a struggle to fly from the catarrh to come, while the moralist will be obliged to shelter himself behind the banner of the catarrhal hygienist, and the reason why now the religious press teems with catarrh cures, and the mysterious bond between religion and catarrh, will be fully revealed.

By a reversal of the argument, however, may not religion and education be a cure for catarrh, and is there not some instance known of a heathen nation afflicted with catarrh being cured by conversion and missionary effort? We fear not, as the American Indian by his extreme care in avoiding exposure and

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draughts seems naturally free from the disease, the Esquimaux protects himself too carefully with furs and train-oil, and all the other heathen nations we can think of have been, sad to say, residents of warmer climes.

The author believes that, in general, if chronic nasal inflammation has produced no painful symptoms it is curable, though painful cases, if quite young, may recover rapidly. Old age too, even when no suffering exists, is a bar to cure. Enlargement of the tonsil, and its accompanying difficulty of nasal respiration, is an early symptom. Our author says, "The greatest hardship that a child experiences is the act of blowing its nose in obedience to its parent's direction;" yet so strong is the religious element in catarrh that we nowhere find him advising the child to blow its nose as a distinct act of disobedience. At the age of fifteen he believes ninety-five per cent. of cases curable, while at twenty the sufferers begin to take precautions themselves against cold, and, strange to say, are almost always orphans, since they do this, he says, "not from experience so much as from obedience to their guardians' instructions." After forty years "a promise of a complete cure cannot be given."

On page 37 we read, "A cold should be driven away as soon as possible." This the author does by sulphate of quinia, ten grains at bedtime and five in the morning, with a laxative pill; but it does not seem to have occurred to him that the habitual use of a laxative, if successful, simply weakens the bowel and prepares the way for that intestinal catarrh which is already so troublesome. As for pure hygienic measures, the bonnets of women should give place to hoods and wraps; the bald head should have a wig or cap; the sensitive, a night-cap; infants, light caps by day and thicker ones at night for eighteen months, and children night-caps till ten years of age in the colder seasons. The hair of males should not be cut short or shampooed, but rubbed with vaseline once a week. Furs and tight shirt-collars are injurious for the neck. But in the matter of underclothing the author fairly revels: especially are women his victims. Three suits, one above another, are requisite for cold weather; in the coldest, four. It seems no wonder that his patients exclaim that they have no shape and are as broad as they are long. In addition there are chest- and back-protectors, and only where the night-cap crowns all are the sufferers from catarrh safe; but he has forgotten to add a respirator, and some telephonic means by which the victim can communicate through her garments with relatives and friends.

The oil of the body being a very precious substance, we are told that underclothes should be seldom changed, not—as, considering the vast number ordered, we should suppose—from economical motives, but because "every change robs the surface of a portion of the oil." Of course soap and water are not to be thought of. On the feet two pairs of stockings are advised, one pair cotton, one woollen, and when the double soled and uppered shoes are removed a heavy pair of woollen stockings should be drawn on in addition. At bedtime the feet should be soaked in warm water and anointed with vaseline; and, lest the warmly-protected creature, if a female, should take cold in parting at night with her lover at the gate, with fiendish humor the parent or guardian is advised that a gate can be constructed in a room adjoining the parlor.

Tobacco being an exhilarating herb in the author's estimation, he spends whole pages in proving that it is only so to those depressed by using it previously. Its effects on the nasal membrane are frightful, especially in light-haired smokers. If a light-haired boy uses tobacco inordinately, "life will be shortened many years," and after death mortification will begin first in the nasal cavity. The whole argument, whatever it is worth, is directed unconsciously against inordinate—not moderate—use of the weed, and the author himself is a reformed immoderate smoker. His most successful antidote for tobacco-chewing is one-quarter grain of quinine on the tongue, and the mastication of a small plug of "fat yellow pine."

The last third of the book is occupied with directions for cleansing the nose and ears, and is profusely illustrated, so that even a child may easily injure itself in an irreparable way after quite a short study of the pictures; but there is something of considerable value in what is said against the too prevalent habit of expectoration and forcible clearing of the posterior nares, which will, we trust, neutralize any bad pictorial effects.

In concluding the notice, it is fair to say that—the author notwithstanding—chronic catarrh is by no means purely the result of repeated acute attacks, and that it probably arises in most cases not from general repeated chilling of the cutaneous surface so much as from repeated irritation of the nasal membrane itself by inhaling the dry, cold atmosphere of our climate; that this, when the constitution is weak, and the membrane not very resistant, sets up the chronic condition, and that at any time for years a removal to a better air would result in cure; in fact, the author in his onslaught upon tobacco grants the whole case; and, further, it seems to require a constitution impaired by more than mere susceptibility to develop the serious catarrh which ends in ulceration and necrosis, and a constitutional taint of a decided character, syphilitic or scrofulous, may always be found, if sought for closely, in such cases. E. W. W.

THE University of Cambridge, England, is about to confer the degree of LL.D. upon the French *savant* Pasteur.

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GLEANINGS FROM EXCHANGES.

HYGIENE OF ALBUMINURIA.—Senator (*Berlin. Klin. Woch.*) especially emphasizes the following features of the hygienic treatment of albuminuria: (1.) The question of the nourishment of patients with nephritis should include a consideration of the influence exercised upon the albuminuria both by the condition of the digestive process itself and by the character of the nourishment. (2.) The rule may be accepted in general that with albuminuria the wants of the system should be supplied rather by frequent small quantities of food than by larger amounts at longer intervals. (3.) Eggs should be forbidden; meat and cheese used sparingly, and of meats preferably veal or poultry; fish is to be recommended; fruit and vegetables are indicated, but the leguminous varieties less so; the use of fat is to be governed by the state of the digestion; spiced, smoked, and salted viands are unsuitable; red wine may be used moderately; beer, spirits, and the heavier wines are to be avoided; a milk diet is extremely useful, but, that it may be sufficiently prolonged, bread or some similar addition should be made. (4.) Saline or alkaline-saline waters, warm or cold, according to the case, are found practically to act favorably, and this probably by effect upon the digestion and composition of the blood, as theoretically they should be a renal irritant; saline baths are useful through their congestive and stimulating effect upon the skin. (5.) Muscular exertion should be very restricted. (6.) An even body-temperature should be sought by clothing, by climate, by retirement to bed if necessary. For clothing, flannel should be worn next the skin; for a climate, a warm and dry one should be selected, free from sudden changes, with a mean temperature from 60° F. to 70° F. (7.) Psychical influences are of great importance in this condition. (8.) With women during menstruation the amount of albumen excreted is always increased, and they should dnring that period be confined strictly to bed. —*Boston Medical and Surgical Journal.*

A TRIAL OF PASTEUR'S CLAIMS IN GERMANY.—The Imperial Board of Health of Germany instituted a series of experiments, under the direction of Dr. Koch, to test the validity of Pasteur's assertions respecting the immunity conferred by his inoculations with mitigated virus, and his theory as to the natural mode of infection. The results of these experiments are now for the first time made public. Pasteur, as is well known, asserts that by cultivating the bacillus in meat broth at a temperature of 42° or 43° C., and freely exposed to the air, its virulence is steadily lessened. To minimize the danger, he advises two successive inoculations,—the first with a very feeble virus, the second with one of greater activity. These directions were strictly followed out, the animals operated on being sheep. Injections of the *premier vaccin* produced little or no constitutional disturbance, but a considerable number of the animals operated on died after inoculation with the *deuxième vaccin*. If the survivors had been now absolutely protected, something would have been gained; but such was not the case, either against artificial or natural modes of infection; for of six sheep which, having already received the *premier* and *deuxième vaccin*, ought to have enjoyed immunity, one died within two days of inoculation with unmitigated virus taken from a case of spontaneous splenic fever. Pasteur has advanced a theory that when the carcasses of animals that have died from any form of anthracosis or have been slaughtered are buried, the bacilli are apt to be brought to the surface by worms along with their casts, and that the bacilli gain access to the circulation of previously healthy cattle through the abrasions of the oral mucous membrane caused by prickly or coarse fodder. This Koch disputes, urging that it is only in the spore-bearing stage that the microphyte is infectious, and that then mere ingestion is sufficient, breaches of surface being quite unnecessary. Soft foods containing bacilli—in fact, potatoes hollowed out and stuffed with the infective matter—were carefully introduced into the throats of the animals. When the matter consisted of bacilli alone, entirely free from spores, no ill effects followed; but on the experiment being repeated with spore-bearing bacilli, whether fresh or such as had been dried for over a year, death invariably followed within two days. To test the protection afforded by the so-called preventive inoculations against natural infection, seven sheep, which had survived or resisted inoculation with pure unmitigated virus, and thus had been thrice "vaccinated," were fed with sporiferous matter in potatoes: two of the seven died of splenic fever on the second day. Dr. Koch therefore asserts that even as regards sheep and cattle the immunity is by no means certain, while none whatever is imparted to rabbits, guinea-pigs, rats, and mice, and man himself may suffer repeatedly from anthracosis. No protection against subsequent infection is afforded by inoculation with the bacilli of erysipelas or relapsing fever, even after the most prolonged cultivation. So that Pasteur has utterly failed on the scanty basis of his partial successes in the case of two diseases—the so-called fowl-cholera and anthracosis—to establish any law of immunity; still less has he made any progress towards realizing his dream of extending its application to the prevention of every infectious disease to which man or beast is heir. His operations are more akin to smallpox-inoculation than to vaccination. They involve the same danger of keeping up the disease by infection of others, without conferring equal security on

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the individuals subjected to it. In short, Dr. Koch maintains that, considering the proved uncertainty of such immunity as is imparted, its probably short duration, and the danger to life not only in the case of the animals operated on, but to others, and to the men in contact with them, Pasteur's preventive inoculation cannot, at any rate at present, be deemed of practical and economical value.—*Medical Times and Gazette.*

MISLEADING CARDIAC MURMURS. — Dr. Hamilton Osgood, in a paper read before the Boston Society for Medical Improvement, calls attention to a variety of adventitious sound produced in the cardiac area, which occurred in a subject free from anæmia and from all other evidences of heart-disease. The supposed murmur was distinct, systolic in time, its quality soft, yet suggesting friction, and located in the pulmonary area with but little propagation. The sound completely disappeared during expiration, and abruptly reappeared upon inspiration. His diagnosis was that the bruit was not endocardial, but was due to a spot of pericardial non-inflammatory roughening, probably congenital, and it was therefore pronounced a case of systolic and accidental friction-sound.

In the examination of this case, especial advantage was thought to be derived from auscultation of the heart during collapse of the lungs, as in forced expiration. In this way the heart is comparatively uncovered and its sounds better defined. This method, therefore, is recommended for the detection of the character of the poorly-defined cardiac or blood murmurs.—*Boston Medical and Surgical Journal.*

NEW HYPODERMIC REMEDY FOR SYPHILIS. —Professor Liebreich brought forward, at a recent meeting of the Berlin Medical Society, a new drug for the treatment of syphilis by the subcutaneous method. This drug rejoices in the name of *Hydrargyrum formamidatum*, and is, therefore, merely a different form of the old cure for syphilis. It is supposed that the formamide of mercury, after hypodermic injection, undergoes disintegration, and so the mercury is set free, and is able to exert its well-known power over the lesions of syphilis. The preparation is easily soluble in water, is of neutral reaction, does not coagulate albumen, is not precipitated by caustic soda, and the presence of mercury can be demonstrated by means of sulphide of potassium. The drug, when injected under the skin, produces its effects very surely and rapidly. This is not regarded as a disadvantage, for the medicine is said to be easily borne, and has never produced salivation in Liebreich's hands. There is very little pain attendant on the injection, which has never excited any inflammation. From a half to a whole of a Pravaz syringeful (a one-per-cent. watery solution) may be injected twice or thrice daily. Liebreich looks on the preparation as the best we yet have for subcutaneous injection.—*Medical Times and Gazette*, January 6, 1883.

PAROXYSMAL HÆMOGLOBINURIA. — According to Boas, paroxysmal hæmoglobinuria is a disease *sui generis*, which must be sharply distinguished from all other kinds of hæmoglobinuria. Each attack is invariably due to cooling of some part of the skin, especially those parts which are most exposed,—hands, feet, nose, or ears. The intensity of the general symptoms and the coloration of the urine are in proportion to the intensity and duration of the chill. The natural paroxysms, and those produced in experiments, are identical in their symptoms. The primary condition in paroxysmal hæmoglobinuria consists in destruction of the red blood-corpuscles and the passage of hæmoglobin into the plasma. The general symptoms are secondary. The cause of the easy destructibility of the corpuscles probably depends upon a diminution in their power of resisting the action of external irritants. The destruction of corpuscles at first occurs only locally in those places which are exposed to cold, and from thence the products of their destruction pass into the blood. The cause of their diminished resisting power is doubtful in the majority of cases. In some it is probably syphilis, and in others malaria, and the treatment, besides being prophylactic, must be directed to the removal of syphilis or malaria when present.—*Deut. Archiv für klin. Med.*, p. 355, vol. xxxii.: *Practitioner.*

ANDROMEDOTOXIN. — In the *Andromeda japonica*, an evergreen plant of Japan, Dr. Plugge has found a poisonous principle: its chemical relations and composition are undetermined as yet. It forms hard, glittering, translucent scales of nearly white color, becoming liquid at 110°–100° C.; it is soluble in ethylic and amylic alcohol, chloroform, acetic acid, dilute solutions of alkalies: acids precipitate it from alkaline solutions. With concentrated hydrochloric acid it forms a greenish-blue liquid which on heating becomes violet red. With a twenty-five-per-cent. solution of phosphoric acid in water, if heated, a bright violet color is produced.

TRANSPLANTATION OF SKIN-FLAPS FROM DISTANT PARTS WITHOUT PEDICLE. — Dr. Wolfe, in a communication to the *Practitioner* (May), lays down the principle that the old Tagliacozzian precept of retaining a pedicle for skin-flaps is based on erroneous observation: the nutrition of the flap does not come through the pedicle, but from the underlying granulations. Success in plastic operations can be obtained with even quite large flaps of skin, provided proper attention be paid to the under surface of the piece transplanted. Dr. Wolfe recommends that every particle of

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the subcutaneous areolar tissue should be removed from the lower surface of the flap with the scissors before it is placed upon the granulating surface; it should not be retained by sutures, but should merely have its border tucked under an incision running around it in the tissues below. Pieces of patent lint, wet with warm water, are to be applied, the lowest to remain undisturbed for three days, after which the part may be dressed every day. This operation is applicable to cases of deformity or loss of the skin of the face, and especially of the eyelid. Successful cases are reported in Dr. Wolfe's paper.

A GREEN CANCER OF THE CHOROID.—Dr. Emil Bock recounts, in *Virchow's Archiv*, the case of a tumor of the choroid which contained biliverdin. The growth was found in a man, aged 40 years, who was the subject of cancer of the liver, presumably secondary; foci were detected in many parts of the body,—arachnoid, lungs, and subcutaneous tissues. A plate is given illustrating the characters of the ocular growth, which was composed of polygonal cells with large round nuclei, the streaks and dots of biliverdin-pigment being richly scattered in an intercellular situation.—*Lancet.*

PERFORMANCE OF NEPHRORRHAPHY FOR THE FIRST TIME IN ENGLAND.—We learn with interest that this operation was performed in Glasgow by Dr. David Newman. The patient is a female, who suffered from floating kidney, which Dr. Newman determined to treat by fixation. The kidney was reached from behind, its capsule stitched to the edges of the incision, and several deep button-sutures were passed through the tissues and kidney-substance. The patient has recovered satisfactorily, and is now quite relieved of her former pain.—*Lancet.*

MISCELLANY.

DECADENCE OF HOMŒOPATHY.—As evidencing the decay of homœopathy, the following statistics from the London *Lancet* of April 14; 1883, are interesting:

The "Homœopathic Directory," published by Leath & Ross in 1862, indicates that the system was in its infancy in this country more than half a century ago, having been represented in 1830 by a single practitioner. In its twenty-fourth year (1853), according to the same authority, it had so grown as to be represented by 213 members. In 1862, after nine more years, the same "Directory" shows 218 qualified practitioners; that is, a small increase of five. A few years later the numbers had increased, according to the "Homœopathic Directory," published by Turner, of Fleet Street, in 1866 to 227, in 1867 to 246, in 1868 to 258, in 1869 to 268, and in 1870 to 273, representing a total increase of 55 qualified practitioners in eight years. In the subsequent and most recent decade all substantial increase from the ranks of the profession soon ceases. In 1871 there were 278 practitioners; in 1872, 279; in 1873, 284; in 1874, 279. Then, according to the "Directory" of the Homœopathic Publishing Company, Finsbury-circus, in 1875 there were 269 qualified practitioners; in 1877, 249; in 1878, 268; in 1879, 275; in 1880, 275. Thus there was an increase in the decade counting from 1870 of only two practitioners. Considering the increase of population and the increase in the numbers of the profession generally, the schism had evidently been losing ground during this decade, notwithstanding the establishment of a London School of Homœopathy, founded with the express object of promoting the system among members of the profession, and notwithstanding also, as I have reason to know, the promise held out to students of a lucrative specialty. In 1881 the number of practitioners willing to enter themselves in the "Homœopathic Directory" had actually diminished to 267, and in 1883 the whole number amounted to only 260,—a serious fact for a system which is nothing if not belligerent and increasing.

GOOD ADVICE TO TRAVELLERS.—"I would strongly advise Americans who contemplate travelling upon the continent to be very chary of patronizing physicians recommended by *hotel- or boarding-house-keepers, concierges, porters*, etc., etc., without first having inquired of their consul, or their banker, or some friend, as to the standing of the party recommended, for it not infrequently happens that these parties plot together exclusively as a matter of personal gain, and without any regard whatever for the well-being or interest of those whom they advise.

"It would be well for persons visiting Europe either to obtain the addresses of competent medical men in the various cities they propose visiting before leaving home, or on their arrival to get advice from some reputable person *out of business and above taking a commission;* otherwise they may have a tenth-rate doctor introduced as the 'former physician to the Emperor,' the 'chief of the hospitals,' the 'doctor of the American Legation,' or some other high-sounding but fictitious title, and they may be left in his hands to be robbed, maltreated, and perhaps murdered.

"Travellers, in fact, should *make it a rule to take any other physician than the one proposed* by a landlord or concierge or courier, unless the medical man thus recommended *be* A COMPATRIOT, *or is endorsed by some disinterested person;* and they should *insist* upon having the doctor of their choice—if they have a choice—*really sent for*, taking no excuse for any delay or neglect in regard to the matter.

"There are reliable and *veritable* American

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physicians in nearly all of the large cities of Europe, whose addresses can readily be found by consulting the *Directory*, which is in the office of every respectable hotel, or by inquiring at the nearest drug-store."—Dr. C. W. CHANCELLOR, Letter in *Baltimore Day*.

THE DEPOPULATION OF FRANCE is seriously occupying the minds of political economists, and recently a deputy in the Legislative Chamber gave as reasons for the decrease: 1st. Because the people have a dislike to emigrate, the government having done nothing to encourage it. 2d. Because the people are not kept enough in the country, and the taxes are too high. 3d. Because the government does not sufficiently restrain prostitution, and does not encourage marriage among the poor. 4th. Because the consumption of tobacco and absinthe is attaining enormous proportions, so that the race is becoming weakened and stunted in intelligence and physique. In any case the situation is grave. One of the most distinguished of French economists, Beaulieu, said recently, "If the morals do not change in France, in fifteen or twenty years the population will have an excess of deaths over births." A bill offered in the Chamber provides for a decrease in the taxes for every family which has more than four children, and proposes a bounty for every child above four where the parent pays no taxes. It is no doubt true that for the workman or the clerk a large family means misery, according to the present *régime*. Everything is so dear in the large towns that concubinage is preferred to marriage, as the responsibilities are less, since the State provides, when required, for the children that may be born.

THE recent death of Dr. William Farr, C.B., for many years the illustrious head of the Statistical Department of the Registrar-General's Office, has been announced. Dr. Farr, for a large part of his lifetime, held the first position among vital statisticians in England, and, indeed, in Europe.

PROF. WM. E. QUINE has resigned his chair in the Chicago Medical College, and has accepted the chair of Practice of Medicine in the College of Physicians and Surgeons of Chicago.

DR. B. W. RICHARDSON, whose death is announced, is not the famous London physician of that name, but a practitioner and physiologist of Dublin.

NOTES AND QUERIES.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES.

DEAR SIR,—May I ask you to correct a statement made in your last number in reference to a paper read by me at the State Medical Society at Norristown? Your issue reads, "Convallaria is pronounced to be a valuable heart-tonic, slowing, regulating, and strengthening the cardiac contractions, and especially useful in mitral regurgitation." My observations claim for convallaria chiefly, if not solely, a regulating power; by this action it is useful in mitral obstruction when irregularity is a symptom, or in dyspnœa from functional palpitation of the heart

Yours, respectfully,
EDWARD T. BRUEN.

1814 LOCUST STREET, May 23, 1883.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY FROM MAY 12 TO MAY 26, 1883.

CAMPBELL, JOHN, LIEUTENANT-COLONEL AND SURGEON, MEDICAL DIRECTOR DEPARTMENT OF THE SOUTH.—Granted leave of absence for one month, on surgeon's certificate of disability. Paragraph 3, S. O. 50, Department of the South, May 21, 1883.

BURTON, HENRY G., CAPTAIN AND ASSISTANT-SURGEON.—Now awaiting orders at St. Paul, Minnesota; assigned to temporary duty at Fort A. Lincoln, D. T. Paragraph 1, S. O. 83, Department of Dakota, May 15, 1883.

PORTER, J. Y., CAPTAIN AND ASSISTANT-SURGEON.—Assigned to duty at Fort Davis, Texas. S. O. 49, Department of Texas, May 14, 1883.

SPENCER, WM. G., CAPTAIN AND ASSISTANT-SURGEON.—Assigned to duty at Fort Hamilton, N. Y. H. Paragraph 2, S. O. 83, Department of the East, May 14, 1883.

GORGAS, W. C., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Granted leave of absence for one month. Paragraph 6, S. O. 51, Department of Texas, May 17, 1883.

HOPKINS, WM. E., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Assigned to temporary duty at Whipple Barracks, A. T. Paragraph 2, S. O. 44, Department of Arizona, May 14, 1883.

MACAULEY, CARTER N. B, FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Assigned to duty at Fort Bennett, D. T. Paragraph 2, S. O. 83, Department of Dakota, May 15, 1883.

MCCREERY, GEORGE, FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—To report for duty to the commanding officer of troops in the field near San Bernardino Springs, A. T. Paragraph 1, S. O. 44, Department of Arizona, May 14, 1883.

RAYMOND, H. J., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Relieved from duty with troops in the field near San Bernardino Springs, A. T., and ordered to return to his proper station,—Fort Apache, A. T. Paragraph 1, S. O. 44, Department of Arizona, May 14, 1883.

WILSON, GEORGE F., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Upon being relieved as Post-Surgeon at Fort Townsend, W. T., assigned to duty at head-quarters Department of the Columbia. Paragraph 2, S. O. 64, Department of the Columbia, May 10, 1883.

WILSON, GEORGE F., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—To report to First-Lieutenant Frederick Schwatka, Third Cavalry, for duty in connection with explorations in the Department of the Columbia. Paragraph 3, S. O. 64, Department of the Columbia, May 10, 1883.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING THE WEEK ENDING MAY 19, 1883.

Surgeon WM. A. CORWIN detached from the Receiving-Ship "Colorado," and granted sick-leave for three months.

P. A. Surgeon M. H. CRAWFORD detached from the United States Steam-ship "Pinta," and ordered to the Navy-Yard, League Island, Pennsylvania.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING THE WEEK ENDING JUNE 2, 1883.

P. A. Surgeon D. O. LEWIS detached from the United States Coast-Survey Steamer "McArthur," and ordered to the Marine Rendezvous, San Francisco, California.

P. A. Surgeon F. C. DALE ordered to the United States Coast-Survey Steamer "McArthur."

Medical Directors J. M. BROWNE and A. L. GIHON ordered as Delegates to the American Medical Association, at Cleveland, Ohio, June 5, 1883.

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PHILADELPHIA, JUNE 16, 1883.

THE AMERICAN MEDICAL ASSOCIATION.

THE Thirty-Fourth Annual Meeting of the American Medical Association, held in Cleveland, Ohio, from June 5 to June 8 inclusive, was very largely attended, eleven hundred delegates and permanent members having signed the register, in addition to which some three hundred members of the Ohio State Medical Society were present at the sessions and were made members by invitation, having adjourned their own Association on this account. The Judicial Council, in conference with the Committee of Arrangements, had directed that each member or delegate, before registering his name, should sign a registry form, in which he was made to subscribe to the Constitution, By-Laws, and Code of Ethics of the Association and to acknowledge his willingness to be governed by them. Although this excited considerable comment, and a few signed under protest, yet its practical wisdom was demonstrated by the complete freedom from any wrangling on the Code question, which it had been feared was doomed to interrupt the harmony of the proceedings of this meeting. The business sessions, although so largely attended, were conducted with decorum and dignity under the direction of the venerable Dr. John L. Atlee, of Lancaster, the President of the Association, who displayed a degree of self-possession and administrative ability which excited general remark. The arrangements of the Committee of Arrangements, of which Dr. X. C. Scott was chairman, were also very satisfactory, except that the places of meeting of the different Sections were too widely separated from one another. The Association was tendered a reception at the Opera-House by the profession of Cleveland and vicinity on Tuesday evening, seven receptions at private residences of citizens were held on Wednesday evening, and ten on Thursday evening, the entertainments winding up with an excursion, on Friday afternoon, to River Bank, a beautiful spot on the border of the lake, at the summer residence of Mr. D. P. Eells, transportation being furnished by the Nickel Plate Railroad Company.

BUSINESS SESSIONS.

First Day, Tuesday, June 5.—The Association was called to order at 10.30 A.M. by the chairman of the Committee of Arrangements, and the proceedings formally opened with remarks and prayer by Bishop Gilmour. The President, John L. Atlee, M.D., of Lancaster, Pennsylvania, then took the chair. General Edward S. Meyer, on behalf of the citizens of Cleveland, delivered an eloquent address of welcome. He contrasted the military and medical professions, as regards their respective services to humanity, in a manner not too complimentary to the former, but decidedly so to the latter. He directed attention to the quiet but powerful influence of the medical profession in the community, and hoped that it would exert all its powers to encourage among the people healthy sentiments upon subjects of hygiene, and especially on the great evils of intemperance and extravagant living, that are such prominent features of American social life, and that are fruitful sources of nervous disease and insanity.

At the close of this address, which was frequently interrupted by applause, the President invited the Vice-Presidents to occupy their places. A like invitation was extended to former presiding officers, and S. D. Gross, N. S. Davis, T. G. Richardson, J. M. Toner, and Wm. O. Baldwin, Ex-Presidents of the Association, came forward and took their seats upon the platform, amidst much applause.

The chairman of the Committee of Arrangements presented the programme for the meetings, and announced the receptions and entertainments. On the recommendation of the committee, the State Medical Society of Ohio was cordially asked to attend during the present session, its members in attendance being made members by invitation, on motion of Dr. Hayes, of Pennsylvania. Protests received with reference to certain names were announced, and referred, without reading, to the Judicial Council.

ADDRESS BY THE PRESIDENT.

Dr. John L. Atlee then delivered his annual address, which, though somewhat extended, was listened to attentively and with evident interest. After thanking the Association for the honor conferred upon him, he said, "We meet here to engage earnestly in furthering the interests and objects of the medical profession. We have come together from all parts of our broad country, charged with these great responsibilities. It is fitting to express here deep regret at the absence from our councils of delegates from the Medical Society of the State of New York. Let us hope that this absence may be only temporary, and that at the next meeting every State may be represented."

Referring to the present rage for specialties, he spoke of his own specialty, which was that of having been a graduate of over sixty-three years' standing, which fact had led him to believe that some reminiscences of his early life might not be wholly unacceptable or devoid of interest and instruction. He began his medical studies in 1815, when medical colleges were few in this country,—the Medical Department of the University of Pennsylvania, the College of Physicians and Surgeons

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in New York, and the institutions of Baltimore, Harvard, New Haven, and Lexington, Kentucky,—the first-named being the leading institution, to which students came from all parts of the country. Among his personal reminiscences he communicated graphic pen-pictures of the noted medical men constituting the faculty of the University in 1817–18 and in 1819–20, and a few of his clinical teachers and classmates,—including Dr. Caspar Wistar, John Syng Dorsey, John Redmond Coxe, Thomas C. James, Nathaniel Chapman, Philip Syng Physick, Joseph Parrish, George McClellan, John Rhea Barton, Isaac Hays, Samuel Henry Dickson, George B. Wood,—and incidentally mentioned some of the peculiarities of teaching and practice at this period. He referred to the establishment of Jefferson College, the institution of Wistar parties, the Philadelphia Medical Society, the green room, quiz clubs, and other interesting features of professional and student life. We have room for but a few extracts from this valuable contribution to American medical history, which has more than a passing interest and value.

The following description of Dr. George McClellan will serve as an illustration of the easy and interesting style and command of language possessed by the author:

Dr. McClellan "was a man of great natural talent, quick perception, and wonderful memory; prompt to decide and prompt to act, he made himself during his pupilage one of the best anatomists in the country, and subsequently brought more talent into surgery than any man I have ever met with. During his brief but brilliant career he performed more surgical operations than any other surgeon in Philadelphia, and he undertook to perform, and did perform successfully, some operations which were considered impracticable by other surgeons. Among these was the removal of the parotid gland. It was my good fortune to visit with him his first patient the day after the operation, and, although it was afterwards reported that it was not the parotid gland, I made a very careful examination of the tumor and of the patient, and was perfectly satisfied of its identity. This operation he performed several times afterwards,—one of them on a young Irishman, where Dr. Dease, an eminent surgeon of Dublin, had previously failed.

"A beautiful illustration of his diagnostic ability was shown to me when on a visit to Philadelphia. A female infant, about four or five months old, whose parents belonged to one of the most distinguished families in New York, was brought by her father to Philadelphia to consult the oldest leading surgeons of the city, who all pronounced the case hopeless. The child had from birth a complete paralysis of the right arm and hand. As Dr. McClellan at that time was beginning to acquire popularity as a surgeon, the father was persuaded to consult him. Dr. McClellan made a careful examination, and found that the clavicle was pressing on the brachial plexus of nerves as it passes over the first rib, and that the paralysis was owing to this cause. All that he did was to elevate the shoulder and the clavicle by mechanical means, and the functions of the arm were entirely restored. I saw the child playing equally well with either arm on its nurse's lap.

"Dr. McClellan was of medium size, fair complexion, and with blue eyes. He was very attractive and agreeable in his manners, very vivacious, and was called 'a bundle of nerves.' He was very fond of society, and a general favorite wherever he was known. There was no jealousy in his disposition; and I may be permitted to add that he was the only surgeon in Philadelphia who congratulated me upon the success of my first operation for ovariotomy in 1843. When I revived the operation, which, after its introduction by Ephraim McDowell, had fallen into disuse, he sought me at my hotel when on a visit to the city, and gave me a most cordial embrace."

Referring to Jefferson College, he said,—

"Dr. McClellan was among the first to suggest and urge the establishment of another medical college in Philadelphia, and, with the assistance of Dr. Eberle, he determined to get a charter from the Legislature. Dr. Eberle, being a native of Lancaster County, and having practised both in the city and county for several years before his removal to Philadelphia, had many friends there, and wrote to them asking their assistance in procuring a charter from the Legislature. With the view of furthering the cause, a public dinner was given to Dr. Eberle by the leading gentlemen of Lancaster, and resolutions were then passed instructing our Representatives at Harrisburg to favor the charter. Notwithstanding the opposition that had always existed at the University to the establishment of another school, a charter was obtained authorizing the trustees of the Jefferson College at Canonsburg to grant degrees in medicine and to locate the school in Philadelphia."

Speaking of the peculiarities of student experience, he mentioned the mode of examination: "Many of the elderly gentlemen present to-day must have heard of the much-dreaded 'green box.' During the time of Drs. Rush and Barton it was reported that favoritism was shown to their respective students; and the same was said of the students of Drs. Chapman and Dorsey. To obviate this, or the appearance of it, a large green screen was placed across one corner of the room, having a door behind it, through which the candidate entered, and here underwent his examination unknown to any one but the dean of the faculty. This mode of examination was adhered to until after the death of Dr. Dorsey, when it was optional with the student to go into the green box or present himself openly before the faculty.

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Some ten or twelve candidates had such a terror of the green box that they went to New York, where they obtained the degree of M.D. by undergoing an examination and paying the graduation-fee.

"Among the facilities for acquiring knowledge offered the student at that time was the privilege of attending the meetings of the Philadelphia Medical Society, which met every Saturday evening. In order to gain admission as a junior member of the Society, which was composed of honorary and junior members, it was necessary for the student to pass an examination. The committee of the year 1817–18 consisted of Drs. Franklin Bache and Jacob Randolph, the latter being Dr. Physick's son-in-law. I remember with what trepidation I went before the committee, and, to my gratification and surprise, the only question asked me was the composition of Glauber's salt. This examination over, I received a parchment certificate of junior membership, and was admitted to the discussions of the Society. After graduation I received a certificate of honorary membership. The proceedings of the Society did not differ materially from those of the present day. A paper was read, and subsequently discussed by many of the leading physicians and surgeons of that period, and was a source of great improvement to the junior members."

The following reference was made to Dr. Isaac Hays: "Among my fellow-students in 1817–18, and fellow-graduates in 1820, I should be unmindful of what is due to extraordinary merit were I not to speak of one who has done more for American medical journalism than any other physician in the country. I allude to the late Dr. Isaac Hays, the editor of the *American Medical Journal*, by whose labors, professional accomplishments, and excellent judgment the leading medical journal of this country was established. Having assisted Dr. Chapman in editing the *Philadelphia Journal of the Medical and Physical Sciences*, the motto of which was the ill-natured quotation from Sydney Smith, "Who reads an American book?" Dr. Hays established, in 1827, *The American Journal of the Medical Sciences*, which to this day, both in this country and in Europe, is admitted to be in character and ability the first. Modest and unassuming, he scorned the arts by which many seek prominence, and during a long and very busy life sustained the character of a high-toned and honorable gentleman. To him are we chiefly indebted for the preparation of the Code of Ethics of this Association, which some of our physicians, from motives we cannot appreciate, would be willing to mutilate or destroy."

Speaking of medical treatment, he said,—

"It was the time of calomel and the lancet. With regard to the one I need not speak, but of the latter I feel well assured that the almost total disuse into which it has fallen has cost many valuable lives. From a very large experience in its use, I am satisfied—fully satisfied—that if we depended more on the early use of the lancet in the congestive and inflammatory states of many diseases, our practice would be more successful than it now is. At the present time there is too exclusive reliance upon medicines affecting the nervous and vascular systems, which act with less efficiency and are less prompt. It is, in my opinion, a very important subject, and I feel assured that ere long the lancet will be more freely used than it is now. In the congestive chills preceding inflammatory diseases and in the old stage of intermittents I have frequently broken up the paroxysm and relieved the patient by the lancet alone.

"With regard to the treatment of that day I shall say little; the text-books then studied fairly present it to you. Would that I could speak more satisfactorily of the treatment of the insane, as I remember it! They were generally confined in the basement of the almshouse, in small cells, some with manacles, others with chains; seldom had they access to fresh air, and often they had nothing but loose straw for their bedding. This unhappy and inhuman state of things continued until Pinol and Esquirol established a course of treatment more consistent with the dictates of science and humanity. In a recent visit to the State Lunatic Hospital at Harrisburg, Pa., of which I am a trustee, not one of the four hundred insane inmates was the subject of mechanical restraint."

In conclusion he made some remarks of present application upon topics interesting the profession:

"With the garrulity, and—may I not call it?—the privilege, of your oldest brother, I present you with some of the reminiscences of my college life. Before I close this address, let me briefly call your attention to some other subjects, which in my opinion are of pressing importance. Let me impress upon the mind of every member of the profession the necessity of strict and undivided attention to the duties of his high calling. Let no outside influence operate to interfere with these duties. When you undertake the care of a patient your whole duty belongs to him. The intermission of a single visit, which, on your part, may have been devoted to pleasure, may sacrifice the life of your patient.

"Above all things, ever strive to maintain the honor and dignity of the profession. Let no selfish or mercenary consideration deter you from observing the laws laid down in our noble Code of Medical Ethics. Cultivate friendly relations with your local medical brethren, more particularly the younger, and regulate your intercourse with all men in such a way as to cast no stain upon the honor of the profession, which is in your keeping.

"In my day, previous to the establishment of medical societies throughout the country,

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and the organization of the American Medical Association, and the general adoption of the Code of Ethics, I saw many disastrous effects from the want of brotherly consideration and kindness. The medical men of that day were often in difficulties. Patients would be taken from one physician to another without ceremony, and so great was the jealousy existing between them that for more than twenty years after my graduation it was impossible to form a medical society in my native city and county, because there were so many aspirants for the honors. Here let me speak of some of the difficulties I had to encounter in my early professional life. Instead of being taken by the hand by the older physicians, every obstacle was thrown in my path, consultations were refused, and the treatment of my patients was unfavorably criticised.

"By the establishment of medical societies and the adoption of the Code of Ethics, a wonderful change has been effected. We now feel it our duty to sustain our younger brethren, to treat them with courtesy and kindness, to save them from their errors and encourage them in all their good work. Had the adoption of the Code of Ethics had no other result than this, it would have been an invaluable blessing to the profession. But it has accomplished more. It has put the seal of condemnation upon all 'isms,' and developed an *esprit de corps* that has enlarged the boundaries of our science and greatly increased the usefulness and social standing of the profession.

"Now, gentlemen, before concluding, let me state that, being aware that reports and papers upon every important topic connected with the different departments of medicine will be presented by the chairmen of the Sections and by individual members, I have not entered upon the discussion of any subject, either medical or surgical.

"Our meetings are for the purpose of promoting social intercourse, as well as for the advancement of medical science; but we should devote sufficient time to the discussion of the various subjects presented to us, and not allow them to be too greatly interfered with by social entertainments.

"One word more, and I have done; and I say it chiefly as a word of encouragement to the younger among you. At the close of a long life devoted unreservedly to the study and practice of medicine, I will say that, notwithstanding its uncertainties, its fatigues, its anxieties, its bitter disappointments, I am completely satisfied that in no other career can a man more fully accomplish his whole duty to God and to his fellow-men; so that when life here is ended it can be truly said of him as (be it said with all reverence) was said of Him whom we all should imitate, '*Pertransivit benefaciens*,'—'He went about doing good.' Trusting that our proceedings may be both harmonious and profitable to us all, and thanking you again for the honor you have conferred upon me, I sincerely hope that the recollections we shall carry home with us will be both agreeable and lasting."

On motion of Dr. J. M. Keller, of Arkansas, a vote of thanks was unanimously passed to Dr. Atlee for his able and very interesting address, which was then referred to the Publication Committee.

THE COLLECTIVE INVESTIGATION OF DISEASE.

A communication from the British Medical Association was read by Dr. John S. Billings. It invited co-operation with the committee of that Association on the work of collective investigation of disease. This communication was received and referred to the Standing Committee of Atmospheric Conditions and their Relations to Prevalent Diseases, of which Dr. N. S. Davis was chairman.

AN APPEAL.

An appeal in the case of Dr. Dwight W. Day was received, and referred to the Judicial Council. On motion, all such communications were directed to take this course, without coming before the Association for its preliminary action.

CLIMATIC OBSERVATIONS AT HEALTH-RESORTS.

A communication was presented by Dr. Didama, of Syracuse, on behalf and at the request of Dr. Tyndale, of New York. It was in the form of a petition to Congress, the Secretary of War, and the Chief of the Signal Service Department, asking for the taking of climatic observations at a number of places of summer resort, by a committee of five competent medical men,—the investigation being conducted more particularly with regard to the sanitary value of such places in the treatment of pulmonary diseases. This was referred, for action, to the next morning session.

The Secretary, by direction of the Chair, read the list of members registered, after which the various delegations held meetings to select representatives to serve on the Nominating Committee.

Second Day, Wednesday, June 6.—The session being opened at 9.30 o'clock, prayer was offered by Rev. Chase S. Pomeroy, D.D. The Secretary read the following names, constituting the

NOMINATING COMMITTEE.

Drs. W. O. Baldwin, Alabama; D. A. Linthicum, Arkansas; W. F. McNutt, California; T. M. Hills, Connecticut; H. K. Steele, Colorado; W. Marshall, Delaware; D. C. Patterson, District of Columbia; Eugene Foster, Georgia; C. F. Parker, Illinois; H. J. Wood, Indiana; W. S. Robertson, Iowa; L. S. McMurtry, Kentucky; W. L. Schenck, Kansas; J. W. Dupree, Louisiana; C. A. Savary,

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Massachusetts; Julian J. Chisholm, Maryland; B. H. Miller, Minnesota; F. K. Owen, Michigan; E. H. Gregory, Missouri; A. J. Fuller, Maine; V. H. Coffman, Nebraska; E. Grissom, North Carolina; B. A. Watson, New Jersey; H. D. Didama, New York; W. M. Beach, Ohio; S. D. Gross, Pennsylvania; A. Ballou, Rhode Island; R. A. Kinloch, South Carolina; D. J. Roberts, Tennessee; H. C. Ghent, Texas; Alex. Harris, Virginia; J. M. Lazell, West Virginia; S. C. Johnson, Wisconsin; T. W. Miller, United States Marine Hospital; Joseph R. Smith, United States Army; A. L. Gihon, United States Navy; W. A. Tipton, New Mexico; J. B. Van Valzah, Dakota Territory.

ADOPTION OF AMENDMENT.

Dr. Foster Pratt, of Michigan, stated that he wished to call attention to a point which would affect the action of the Nominating Committee. At the last Association meeting an amendment to the Constitution was laid on the table, which was to the effect that no members but those present were eligible to office. On motion, the amendment was taken from the table, and Section 13 of the By-Laws was so amended as to read that none but members present would be eligible for the offices of president, vice-president, secretary, treasurer, or chairman or secretary of Sections.

RESOLUTIONS ON ARMY MEDICAL MUSEUM AND LIBRARY.

Dr. S. D. Gross presented a paper signed by Austin Flint, Oliver Wendell Holmes, and himself, recommending an appropriation for the National Public Museum and Medical Library, and the providing of means whereby this valuable collection shall be preserved from danger of fire. At the conclusion of this paper Dr. H. A. Johnson, of Chicago, presented the following resolutions:

"*Whereas*, There has been formed in Washington, under the direction of the Medical Department of the Army, a museum of unrivalled completeness and excellence, illustrating military medicine and surgery, and a medical library which is believed to be the largest and most valuable in the world; and

"*Whereas*, It is believed to be of the highest importance for the promotion of medical science, literature, and education in this country that these collections should be preserved and made and kept as complete as possible; and

"*Whereas*, It is believed that this can be best done by keeping them under the management which has already produced excellent results and by its publications has made them available for use throughout the country: therefore

"*Resolved*, First, That the American Medical Association respectfully urges upon Congress the importance of at once providing a commodious fire-proof building to contain the Army Medical Museum and Library.

"Second, That the annual appropriation for this library should be sufficient to enable it to obtain all new medical publications of all countries as soon as they appear, and also to complete its collection of medical books heretofore published, and that for the purpose the sum of ten thousand dollars is considered a reasonable and proper annual appropriation, and Congress is requested to grant that sum in addition to the amount required for the Medical Museum.

"Third, That it is of the greatest importance that the index and catalogue of this library, now in course of publication, should be issued as rapidly as it can be prepared for the press, and Congress is urged to make the necessary appropriation for the purpose.

"Fourth, That a special committee of five be appointed, of which the President of the Association shall be *ex-officio* chairman, to present this matter to Congress, and to call the attention of State local medical societies, and of all who are interested in the progress of medicine, to the importance of furnishing to members of Congress and Senators full information as to the value of the museum and library, and the esteem in which they are held by the medical profession of the United States."

These resolutions were adopted.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

The report of the Board of Trustees with regard to journalizing the Transactions was presented and read by Dr. N. S. Davis.

The Board, consisting of N. S. Davis, of Chicago, E. M. Moore, of New York, J. M. Toner, of Washington, H. F. Campbell, of Georgia, J. H. Packard, of Philadelphia, L. Connor, of Michigan, P. O. Hooper, of Arkansas, A. Garcelon, of Maine, and L. S. McMurtry, of Kentucky, had held several meetings during the year, and had decided upon a general plan for conducting the Journal of the American Medical Association:

A programme for a weekly medical journal containing an average of thirty-two double-column pages of reading-matter was agreed upon,—each number to contain a department for original articles, embracing all such papers, addresses, reports, etc., as should be referred for publication by the Association, and such other original matter of value as might be contributed for that purpose; a department containing a summary of the progress in the various departments of medical science; an editorial department proper, especially devoted to the discussion of such topics as would be likely to aid in promoting the interests and efficiency of medical organizations, both national and State; a department of correspondence from the more important medical centres, domestic

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and foreign; and a department of miscellaneous items of intelligence, especially in relation to the doings of all medical and scientfic societies in this country, and also of notices of the duties of committees, the presentation of papers, the practical working of associations, the time and place of meetings, etc.

The Board had published forty thousand circulars containing the principal features of the plan, together with forty thousand blank pledges of support of such journal if published, and mailed them to members of the profession in all the States and Territories. It required three-fourths of these to supply fourteen States, leaving only the remaining fourth for twenty-seven States. The comparison of returns from States well supplied and those not so well supplied indicates that an increase of twenty-five per cent. would have been realized if all the States had been supplied. As it is, two thousand one hundred and fifty answers had been received; twelve were direct expressions of opposition to the proposed change, thirty-eight were equivocal, while twenty-one hundred were unqualified pledges of support, either by prompt payment of the annual dues or by subscription.

By reference to the list of members it was shown that five hundred members had not answered, while nearly the same number not members have pledged their support. This makes the aggregate number of subscribers twenty-five hundred as actual basis of income, supposing that those members who failed to reply will still continue their membership. This would indicate a revenue of $12,500.

It is deemed best to issue thirty-five hundred copies weekly, in order to have a sufficient number of extra copies for all purposes, including sample copies. This number, on good paper, can be issued for $8000 a year, leaving $4500 for editorial work and current expenses of the Association. Advertisements in a journal reaching all parts of the country, as this one would, will probably bring $5000 more, leaving a balance after paying $6000 for editorial work. Bids have been received from two reliable printing establishments in Washington, three in Philadelphia, two in New York, and two in Chicago.

At a meeting held at the Grand Pacific Hotel, Chicago, January 17, 1883, at which Drs. Toner, Packard, McMurtry, Davis, and Connor were present, it was unanimously decided to publish the Journal.

The following resolutions were then adopted:

"1. The editor is to take direct supervision of the work, and for business purposes should employ a clerk competent to assist in all business matters.

"2. For assistance in editorial work he should select an assistant competent to collect and write up the progress being made in all departments of medical science, and should engage reliable correspondents.

"3. He should establish correspondence with secretaries or proper officers of all State medical societies, with view to procuring official and private contributions to its pages.

"4. Through his clerks he should solicit advertisements from all medical educational institutions and hospitals open for clinical instruction, book-publishers, pharmaceutists, instrument-makers, and all other legitimate business interests; but all advertisements of proprietary, trade-mark, copyright, or patented medicines should be excluded. [This announcement was received with loud applause.] Neither should any advertisement be admitted with one or more names of members of the profession as endorsers, having their official titles or positions attached." (Renewed applause.)

The publication was awarded to the firm of A. D. Newell & Co., of Chicago, and Chicago was chosen as the place of publication.

It is thus seen that the Board had complied with all the instructions given them.

The report of the Board of Trustees was adopted with enthusiasm, after which Dr. McMurtry, of Tennessee, secretary of the Board, announced that, in conformity with the authority invested in the Board, it had elected Dr. N. S. Davis editor of the Journal.

Dr. Davis, in a few remarks, said that he accepted the duties thus conferred upon him, fully appreciating the difficulties and responsibilities which they involved, although it had caused him more hesitation and required a longer period of consideration than any other question in his life. Although the *British Medical Journal* had been referred to as our model, he deprecated criticism and comparison for several years to come, as that Journal did not attain its present standing until after many years. He announced that the Journal might be expected to appear about July 1, and stated that Dr. William Lee, of Washington, D.C., had consented to prepare reports on medical progress, which should present all the important advances in medical science throughout the world.

On motion of Dr. Bush, of Delaware, a vote of thanks was tendered to Dr. Davis for his willingness to serve the Association as editor of the Journal, and for his arduous and faithful labors.

Dr. Atkinson stated that he was personally so warmly interested in the success of the Journal that he would contribute his services without compensation for the coming year, in order that the funds might prove sufficient to establish it.

Dr. Cohen moved that the Association issue an annual volume, containing merely the minutes, but otherwise uniform with the previous annual Transactions. This motion was referred to the Board of Trustees for decision.

REGISTRY BLANKS.

A delegate, Dr. Palmer, of Michigan, inquired with regard to the binding force of

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the blanks offered for signature,—whether such subscription would prevent any change being made subsequently in the Constitution, By-Laws, or Code of Ethics. The Chair informed him that they were only binding so long as they were the laws of the Association: this would not prevent changes made in the prescribed and proper method.

ADDRESS ON MEDICINE.

Dr. J. H. Hollister, of Chicago, chairman of the Section on Practical Medicine, read an able address, presenting a review of some of the principal medical subjects which had engaged the attention of the profession during the year. He insisted upon the position of medicine as essentially a department of physical science, and upon the need of pursuing scientific methods in its study, and warned against hypothetical and unsettled premises as foundations for practical conclusions.

In medicine, forces, mental and material, interchangeable, interdependent, and inseparable, manifest themselves in ways so manifold, and with so many essential facts undiscovered, that reason is compelled to thread her way with steps slow and uncertain, sometimes in truth, ofttimes in error, ever painfully conscious of her weakness and of the mysteries which confront her on every side. Thus only may we account for the seemingly meagre fruitage which represents the labors for more than two thousand years of some of the ablest minds which the world has ever seen. Those great problems of health and disease, of life and death, which affect the well-being of the race, have been matters of patient investigation by many of the foremost men in every generation, and many of them have wrought out work which will endure as long as literature shall survive. But the essential causes of disease have been in the main so obscure, and in their expression so varied and complex, that the best of men have been compelled to conclusions largely inferential.

The past year has been very prolific of trustworthy, accurate, and able workers. Probably no year in the world's history has witnessed an equal amount of legitimate original investigation. He praised the critical, earnest spirit manifested by these men, each ready to contribute his share to the light of science, and to repudiate everything unverified, or criticise and reject where the data are insufficient. He called attention to the co-operation of men of science of different nationalities, and in illustration said that neither Germany, France, nor Switzerland is indifferent when Bizozero speaks from Italy, nor is the Old World regardless of the New.

Secondly, the medical journalism of the year claims favorable comparison with that of any year that has gone before.

Thirdly, the masses of the profession are steadily ascending to a higher position of attainment. The physicians of the present day read more, they think better, they practise their profession with more intelligence and with better results. At no time before were there so many talented and industrious physicians working in all the domain of medicine and surgery as there are to-day. Feats are now accomplished by hundreds of operators which would have immortalized either of them not a hundred years ago; and pathological investigation and physical diagnosis have reached a point never before attained.

Referring to the modern pathology, he quoted the opening sentence of the "Dictionnaire Annuel" for 1882, in the words of Garnier, "*Des microbes, toujours et partout des microbes. Rien que des microbes.*" He continued, "The discoveries of science are not always comforting, and I doubt whether it is really conducive to our happiness to discover what animated bodies we possess." The microscope commands the advance today, and he acutely observed that "assertions based upon its revelations, be they true or false, can only be tested, *accepted* or *rejected*, by authorities equally skilled in microscopy. In this field no man can speak with authority who cannot with equal skill review the work of other men." Speaking of the present degree of perfection of the microscope, he said that the limit of measurement in microscopy is $\frac{1}{111000}$th of an inch, but beyond this lies the molecule and the atom. It is idle to speculate as to when or where the limits of human vision shall finally fall; but from the diligent study of what lies within the present range of vision there certainly can come no harm,—there certainly is promise of great good.

Two subjects more than any others claim our attention at the present hour: one is the composition of the blood; the other is the agency of microphytes in the production of disease.

He further referred to the importance of the researches of Bizozero on the blood, and the discovery of *blutplatchen*, and the rôle they are asserted to play in the development of fibrin, for if this view be accepted the late theories of fibrin-formation by the agency either of a ferment or of chemical affinities are set aside, and the morphological changes noticed by the degeneration of these cells must be accepted instead as the essential fact in fibrin-formation. In this connection he called attention to the observation of Norris on the third corpuscle of the blood, and acknowledged priority for him in this direction. The reticulum claimed by some as existing in the red blood-corpuscles, he stated, was an optical delusion, caused by the imperfect focusing of the microscope. The careful investigations of Dr. Lester A. Curtis were referred to with approbation, being considered as of great value. In these observations, recently published, this supposed third corpus-

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cle of Norris is well shown. It was considered as a pathological appearance due to altered nutrition and structural change in the blood.

Speaking of microscopic organisms as causes of disease, he referred to Koch's contributions, and especially to his demonstrations of the bacillus tuberculosis, as painstaking, admirable work, and reviewed his methods with approbation. The question whether these organisms are causative or only concomitant remains to be settled. In some diseases the connection between the disorder and the low organic forms has been quite well demonstrated. He believed that anthrax stands at the head of diseases that can be propagated by inoculation with specific bacteria. Erysipelas is also coming to be classed in the list of parasitic diseases. There are good reasons, therefore, for accepting the germ-theory of some forms of specific disease. He warned against carrying out this view, however, in clinical medicine to such an extent as to adopt a germicide treatment for disease, for fear that in attempting to destroy the germs we may poison the patient.

Referring to the law recently adopted in Italy, restricting the sale of patent medicines and requiring their exact composition to be stated, he inquired, "How long shall enlightened America fall so far behind Italy in the enactment and enforcement of similar laws?"

He concluded, "With a view to the advancement of medical science in America, to the end that its people may command a better service, and that in the advancement in the years to come the profession in our country may be more creditably represented, I shall crave your indulgence while I close this paper with the following questions and suggestions:

"Is the time not nearly at hand when the medical men of the United States shall be prepared to institute something like the following action?—

"Let the medical profession in each State, in such manner as seems most satisfactory, designate one of their number to constitute, with a like appointed member from each of the other States, a nominating board.

"Let it be the duty of this board to nominate a list of men suitable for appointment by the President as members of a medical bureau, to be constituted with specific powers and duties: in this bureau, composed, say, of ten members, let the army, the navy, and the marine service have proper representation.

"Let the members of the bureau be subject to removal only for cause (one of which shall be the attainment of a specified age), and receive a salary each of not less than ten thousand dollars annually, to be paid by those who are applicants for the degree of doctor of medicine.

"Let the laws of the various States be so modified that the power of conferring medical degrees shall rest *solely in this body*.

"Let sessions for examinations be held in all the States at such times and places as wisdom may dictate, to the end that all medical students shall have ample facilities for attendance.

"Let the standard of requirements be reasonable, but at the same time such as shall inspire ambition among the students and respect at home and abroad.

"Let students graduated by the National Medical Bureau receive an honorable distinctive title,—say that of National Fellow of Medicine.

"In due time let all governmental appointments, as in the army and navy and in the marine hospital service, be made from this list. In all contract services and marine and railway service let such graduates have preference, and in all public positions let them receive encouragement; let the State Boards of Health be ordered, after a specified time, to require that those only who are thus graduated may legally practise medicine in the several States.

"The higher interests of our commonwealth are inseparably related with the highest attainment possible in the successful treatment of disease. Let it be made clearly apparent to the Legislatures of the several States, and to the National Government, that the general good can best be served by this procedure, and the necessary laws would be speedily enacted.

"To such a movement the colleges could offer none other than a selfish opposition; and how long would the will of the few hundreds of professors stand in the way of the express convictions of tens of thousands of physicians?

"Let physicians encourage only those to enter upon the study of medicine whose ability and previous education give reasonable assurance of an honorable graduation. Let them advise the attendance of those students only at such medical colleges as have made this provision for final graduation, and all respectable colleges would soon fall into line."

He asked, in conclusion, that the profession begin emphatically to assert its own self-respect by calling a halt and requiring that the indiscriminate grinding of diploma-mills shall cease. With the medical profession of America such an advance is possible; in it is vested the power to correct abuses which are only too apparent.

In the adoption of such a plan, wisely and impartially executed, he could see the possibility of a degree of medical culture such as the world has not yet seen.

On motion, this address, which had been listened to with great interest throughout, was referred to the Committee on Publication.

ADDRESS ON OBSTETRICS.

Dr. J. K. Bartlett, of Wisconsin, presented

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his address on obstetrics, which was read by Dr. Nicholas Senn, of Milwaukee.

At the outset he discussed some of the surgical questions of gynæcology. With regard to Emmett's operation, he believed that undue importance had been attributed to the lesions of the cervix, and that the value of the operation had been exaggerated. Experience, however, has served to present more definite indications for the performance of the operation and to give clearer conceptions of its range of applicability, thus leading to a more just appreciation of its real merits. Battey's operation and Tait's operation were also discussed in the same cautious and temperate manner. The treatment of extra-uterine pregnancy by electricity, as practised by Thomas, was referred to in terms of commendation as a safer and surer means of relief than any other discovered previously, and several successful cases were quoted. The operation of transfusion of blood for post-partum hemorrhage, although theoretically of great value, had been found in practice to be of limited service. He recommended the use of saline solutions, as being convenient, safe, and efficient.

Turning his attention to obstetrics proper, he discussed the use of the obstetric forceps, and advised caution and skill in their employment. They should be resorted to only where the condition of the mother or child seems to require them, never for the purpose of saving the time of the medical attendant. He referred to a form of forceps lately recommended by Dr. Alexander Duke, of Dublin, which are to be attached to a belt fastened around the waist of the accoucheur, in order to enable him to exercise more tractile force, and he suggested that a one-horse-power electric motor might be substituted; which, by doing all the pulling, would relieve both the operator and the mother of any exertion whatever. Ergot he had found to be most efficient in cases of delay in the second stage of labor due to insufficient contraction, where no pelvic obstacles exist. He uses a recent infusion (gr. xxx to f℥iij), giving a tablespoonful every thirty minutes until some result is apparent. The employment of anæsthetics was advocated in labor to relieve suffering: they should not be given for their full effect, but simply to the extent of dulling the sensibility to pain without loss of consciousness. Cleanliness was spoken of as the great prophylactic to septic poisoning; and as regards intra-uterine injections, their beneficial effect he regarded as being more attributable to their detergent effect than to any specific antiseptic action.

In conclusion, he referred to the connection between pelvic disorders and general ill health, and claimed that general treatment is often as necessary as local measures. No one who has not received thorough training in general medicine, and has not by many years of general practice tested, confirmed, and enlarged his knowledge, is fitted to be a specialist. When medical gynæcology is thus studied and practised, aided by general and local therapeutic and hygienic resources, which such research in time will develop, the clearer and surer will be the diagnosis which the future will bring, and the time will soon come when the present brilliant triumphs of the surgical gynæcologist will grow pale before the achievements of his medical coworkers.

This address was likewise referred to the Committee on Publication.

REPORT ON NECROLOGY.

Dr. J. M. Toner, chairman of the Committee on Necrology, presented a report, which was referred, without reading, for publication.

NEW TRUSTEES OF THE JOURNAL.

The President announced the action of the Nominating Committee with regard to filling four vacancies in the Board of Trustees of the Journal,—the first a successor to Dr. Davis; the other three, as their terms had expired, were renominated: Drs. A. Garcelon, Maine; J. O. Hooper, Arkansas; L. S. McMurtry, Kentucky; and J. H. Hollister, Illinois. These nominees were unanimously elected by vote of the Association.

Third Day, Thursday, June 7. — Prayer was offered by Rev. N. S. Rulison, D.D., at the opening of the meeting at 9.30 A.M.

FOREIGN DELEGATES.

The Secretary announced the receipt of a letter from the Secretary of the International Medical Congress, inviting the Association to send delegates. The President made the appointments to the next session at Amsterdam, as follows: Drs. G. J. Engelmann, of St. Louis; W. M. Finley, of Altoona, Pa; Walter L. Ziegler, Lancaster County, Pa.; M. H. Alter, Armstrong County, Pa.; R. B. Cole, San Francisco; James H. Warren, Boston; C. H. Von Klein, Hamilton, Ohio; W. M. Lawlor, San Francisco; Henry Martin, Boston; J. C. Hutchison, Brooklyn; A. M. Hawes, Detroit; Edward Borck, St. Louis; T. F. Prewitt, St. Louis; E. P. Allen, Pennsylvania; H. McCall, Michigan; I. N. Quimby, New Jersey; and S. C. Gordon, Maine.

TIME OF MEETING OPTIONAL WITH THE NOMINATING COMMITTEE.

On motion of Dr. D. M. Keller, of Arkansas, an amendment authorizing the Nominating Committee hereafter to fix the date of the annual meeting, instead of adhering to a prescribed time, was taken from the table and adopted.

RESOLUTIONS OF RESPECT.

The following resolutions were presented by Dr. Foster Pratt, having been adopted in the Section on State Medicine:

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"*Resolved*, That the labors of Dr. William Farr, of England (recently deceased), in the organization, classification, and compilation of vital statistics,—labors begun in 1838, and perseveringly, wisely, and ably continued by him for nearly half a century,—are recognized by the medical profession of the United States as an enduring monument of his ability and learning as a physician, as the real foundation of our own sanitary science, and as a perpetual blessing to present and future generations of our universal humanity, entitling his name and fame to stand with that of other great men whose genius and labors have resulted in beneficial revolutions of the medical and sanitary thought and activities of the civilized world." Adopted.

Resolutions of condolence to the wife and family of Dr. Hubbard, of Ashtabula, who died suddenly while the Association was in session, were offered by Dr. Reed, of Iowa, and were adopted and ordered to be spread upon the minutes.

RESTRICTIVE LEGISLATION WITH REGARD TO THE SALE OF POISONS.

On motion of Dr. D. H. Batchelor, of Rhode Island, a committee was directed to be appointed to address the Legislatures of the several States, by petition or otherwise, requesting the enactment of more stringent laws with regard to the sale of toxical agents.

TRAINING OF NURSES.

Prof. S. D. Gross presented the following, which was adopted:

"*Whereas*, Good nursing is of paramount importance to the comfort of the sick and to the restoration of their health; and

"*Whereas*, The subject is one which strongly addresses itself to the common sense and kindly sympathy of every intelligent member of society: therefore

"*Resolved*, That this Association, fully recognizing the importance of the subject, respectfully recommends the establishment, in every county and town in our States and Territories, of schools or societies for the efficient training of nurses, male and female, by lectures and practical instruction to be given by competent medical men, members, if possible, of county societies, either gratuitously or at such reasonable rates as shall not debar the poor from availing themselves of their benefits."

SECTION ON PSYCHOLOGICAL MEDICINE.

An amendment establishing a Section on Psychological Medicine was offered by Dr. W. Hay, of Chicago, and laid over, under the rule, for one year.

REPORT OF THE COMMITTEE ON METEOROLOGY, ETC.

Dr. N. S. Davis, chairman of the Standing Committee on Atmospheric Conditions and their Relation to the Prevalence of Diseases, read the annual report. He detailed a number of experiments and observations made at twelve different stations, especially with regard to ozone and organic constituents of the atmospheric air. One observer, Prof. Long, returned valuable statistics, showing, among other features, the amount of organic impurity in the air for each day of last year. The chairman stated that he believed this to have been the first complete record of the kind kept in this country or in any other.

The committee offered its report for publication as part of the Transactions of the Association, and asked to be continued. It also expressed thanks to General Hazen, Superintendent of the United States Signal Service, for valuable services rendered. The resolution introduced yesterday relative to the appointment of stations of observation, which shall furnish data in regard to the effect of the atmosphere in certain localities with reference to pulmonary diseases, by Dr. Didama, was, on motion, taken from the table, and referred to this committee.

At the request of the chairman, Dr. Davis, Dr. Didama, of Syracuse, was added to this committee.

REVISION OF THE CODE OF ETHICS.

A series of resolutions offered by Dr. S. Pollak, of St. Louis, and emanating from the St. Louis Medical Society, asking that a committee be appointed to take into consideration the advisability of revising the Code of Ethics, was promptly laid upon the table.

A motion, made by Dr. Brodie, that all papers shall have the approval of the chairman of the Section before which they are to be read, was likewise laid upon the table.

ADDRESS ON SURGERY.

Dr. W. F. Peck, of Davenport, gave an interesting and able *résumé* of the principal topics of surgical interest which occurred during the past year, and detailed some of the evidences of progress. The relation of Koch's hypothesis to articular disease of a tubercular character was mentioned, but was not regarded as satisfactorily settled. He did not believe that practical surgery had been directly benefited by Koch's experiments and teachings, but the germ-theory of the origin of septicæmia, pyæmia, abscess, gangrene, inflammation, etc., supported by experience, will tend to give new and more efficient reasons for the use of antisepticism in practice. Greater confidence in the details of operative procedure, and scrutinizing attention to cleanliness, have certainly been suggested by these recent investigations. Antiseptic treatment does not necessarily imply carbolic acid, although, in experiments made by Dr. A. T. Cabot, of Boston, upon detached dead tissue, it was found that it acted more

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promptly than any other agent in arresting putrefaction and destroying micro-organisms of decomposition.

The antiseptic method may be regarded as embracing, besides the spray, the close and fixed apposition of wounded surfaces, rest, pure air, hygienic surroundings, and drainage if practicable.

Referring to the acknowledged lessened mortality from grave operations, he asked, how can this change be explained? He did not believe that it would be maintained that it was solely due to antisepticism as practised by Lister, but he attributed it to greater attention to the minutiæ of operation, and strict cleanliness. In forty-eight cases he had performed abdominal section,—forty-six for the removal of ovarian tumors, once for adherent ovary, once for intestinal obstruction. Of the first thirteen, operated upon under the spray and using carbolic solution for washing, there were six deaths. In the remaining thirty-one ovarian operations, as well as the öophorectomy and laparotomy, the spray was not employed. Both of the latter cases recovered, and twenty-seven of the ovariotomies. He explained this on the grounds already mentioned. The use of the electric light as a means of illumination for surgical operations, the Thompson operation of exploring the vesical cavity, the feasibility of gastrotomy for cancer of the pylorus, laparotomy for intestinal obstruction, nephrorrhaphy, ligature of the innominate artery, and a new method of ligature of spermatic veins in the treatment of varicocele, were all discussed in this paper, which was referred to the Committee of Publication.

ADDRESS ON STATE MEDICINE.

Dr. Foster Pratt, of Michigan, chairman of the Section on State Medicine, then read the annual address. Without stopping to dwell upon any special topic suggested by the history of last year, he called attention to the great change in public sentiment upon sanitary questions which had occurred in the decade since the establishment of a Section on State Medicine in 1873 in this Association. In reviewing what has been accomplished, he said, "Sanitary organization and machinery have been developed, and to a great degree perfected; men have been educated for special work; books, lectures, and discussions have greatly multiplied, clearly indicating an appreciation of the work by the public and a desire for more knowledge on the subject. The heating, lighting, and ventilation of our homes and other buildings have been improved; the influences which vitiate the air have been removed, or methods for their neutralization adopted." The causes of disease depend largely upon fixed physical laws, and by the discovery of these we may be able to prevent disease. Prior to 1873, only two States in the Union had State Boards of Health; now, in twenty-nine States sanitary organizations have been adopted, while eleven still refuse to make any provision for a State Board of Health; but ere long every State in the Union will fall into the line of advancement, and then a majority of States will demand a National Board of Health. What then will Congress do? The agency and aid of the American Public Health Association in procuring these results, as well as the influence and teachings of family physicians, were mentioned in terms of grateful recognition.

The practice of isolation of cases of contagious diseases has done much to prevent their spread. Dr. Pratt next referred to the admirable work done by the late Dr. Farr, of England, in originating the work of collecting vital statistics. He then gave a description of advanced methods of work in his own State: these included sanitary meetings at which papers on sanitary questions were read by physicians, ministers, dentists, and others, including ladies. By recent improvements in sanitary science he did not hesitate to assert that five per cent. has been added to male and eight per cent. to female life. In this connection he spoke of the useful work of Dr. H. B. Baker, of Brooklyn, in vital statistics, and commended it for its faithfulness and ability, and he invited attention to the work performed in his own State, as shown by the annual volumes of the State Board of Health.

Speaking of the great interest manifested in the treatment of the insane, and the increased belief in the curability of these unfortunates and their restoration to the duties of life, he was inclined to look upon this as a possible danger to society and as tending to increase the amount of insanity in the community. The question of the prevention of insanity is increasing in importance, and forms a problem in State medicine of present interest.

Referring to expert medical testimony, he believed that expert medical evidence occupies an uncomfortable and undignified relation to American law and practice, but there does not seem to be for the present any hope of relief. When our law of trials will permit courts to determine who are experts, and to call them to testify for *science* and relieve them from the appearance of testifying for a *side*, their evidence will command more truly than now the respect and the confidence of courts, juries, parties, and people. He in conclusion suggested a change in the title of the Section which he had under his charge at this session. It should be "State Sanitation" instead of State Medicine, its object being the medico-legal prevention of disease.

TREASURER'S AND LIBRARIAN'S REPORTS.

The Treasurer, Dr. R. J. Dunglison, presented his report, showing a balance on hand of $903.93, which was audited and found correct. The Librarian, Dr. C. H. A. Klein-

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schmidt, of Washington, D.C., in his report announced that there were 1817 distinct titles and 5713 volumes, including pamphlets, in the library. The report was adopted, and $200 was placed at the disposal of the Librarian for binding, etc. The subscription of $50 for the Index Medicus was likewise continued.

COMMITTEE OF PUBLICATION.

Dr. Albert Frické, chairman of the Publication Committee, presented the thirty-third annual volume of Transactions to the Association, which had been duly published and distributed. He also announced that an index of the entire series of volumes of Transactions had been prepared, and would soon be ready for delivery to the members. It was stated that 1500 copies had been ordered, at a cost of $500, and it was recommended that a charge of one dollar per copy for this index be made. The report was adopted.

REPORT OF NOMINATING COMMITTEE.

The Committee on Nomination then reported the following officers: President, Austin Flint, Sr., of New York; Vice-Presidents, R. A. Kinloch, Charleston, S.C., T. B. Lester, Kansas City, Mo., A. L. Gihon, U.S.N., S. C. Gordon, Portland, Me.; Treasurer, R. J. Dunglison, Philadelphia; Librarian, C. H. A. Kleinschmidt, Washington, D.C. The place of meeting for 1884 is Washington, D.C., on the first Tuesday of May. The chairman of the Committee of Arrangements is Dr. A. Y. P. Garnett, of Washington, D.C. Assistant Secretary, Dr. D. W. Prentiss, of Washington, D.C.; Judicial Council, Drs. F. D. Cunningham, Virginia; H. O. Marcy, Massachusetts; W. O. Baldwin, Alabama; J. S. Billings, U.S.A.; Freeman W. Miller, U.S.M.H.S.; Eugene Grissom, North Carolina; R. N. Todd, Indiana; to fill vacancy in Judicial Council for class 1884, Dr. E. W. Clark, Iowa.

The chairmen and secretaries of the various Sections were then read, as follows: *Practice of Medicine:* chairman, Dr. J. V. Shoemaker, of Pennsylvania; secretary, Dr. W. C. Wile, of Connecticut. *Obstetrics and Diseases of Women:* chairman, Dr. T. A. Reamy, of Cincinnati; secretary, Dr. J. T. Jelks, of Arkansas. *Surgery and Anatomy:* chairman, Dr. C. D. Parkes, of Illinois; secretary, H. O. Walker, of Michigan. *Ophthalmology, Otology, and Laryngology:* chairman, J. J. Chisholm, of Maryland; secretary, Dr. Thompson, of Indiana. *Diseases of Children:* chairman, Dr. William Lee, of Maryland; secretary, Dr. W. R. Tipton, of New Mexico. *Dental and Oral Surgery:* chairman, Dr. T. W. Brophy, of Illinois; secretary, Dr. John S. Marshall, of Illinois. *State Medicine:* chairman, Dr. D. J. Roberts, of Tennessee; secretary, Dr. Franzoni, of Washington, D.C.

The Committee on State Medicine consists of one member from each State of the Union, as follows: Alabama, Jerome Cochran; Arkansas, J. J. McAlmont; California, W. F. McDermott; Colorado, Charles Denison; Connecticut, C. W. Chamberlain; Dakota Territory, J. B. Van Valzah; Georgia, J. P. Logan; Illinois, O. C. De Wolf; Indiana, George Sutton; Iowa, W. S. Robertson; Kansas, D. W. Stormont; Kentucky, J. P. Thompson; Louisiana, S. C. Chaillé; Maine, S. H. Weeks; Maryland, John Morris; Massachusetts, H. J. Bowditch; Michigan, F. K. Owen; Minnesota, C. N. Hewitt; New Mexico, M. M. Milligan; District of Columbia, S. Townshend; Delaware, L. P. Bush; Oregon, H. Carpenter; Mississippi, H. H. Gault; Missouri, Lester Hall; Nebraska, L. B. Larsh; New York, E. M. Moore; New Jersey, Ezra M. Hunt; North Carolina, James McKee; Ohio, T. L. Neal; Pennsylvania, R. J. Dunglison; Rhode Island, C. H. Fisher; South Carolina, Manning Simmons; Tennessee, C. C. Fite; Texas, Thomas D. Wooten; Vermont, S. W. Thayer; Virginia, J. L. Cabell; West Virginia, Dr. Moffit; Wisconsin, J. T. Reeve; United States Army, J. P. Smith; United States Navy, J. M. Brown; United States Marine Hospital Service, P. H. Bailhache. The Committee on Necrology consists of one member from each State: J. M. Toner, Washington, D.C., chairman; Alabama, R. F. Michel; Arkansas, Jos. C. Turner; California, Henry M. Gibbons, Jr.; Colorado, Charles Denison; Connecticut, C. H. Pinney; Dakota Territory, J. B. Van Valzah; Georgia, H. F. Campbell; Illinois, J. H. Chew; Indiana, William Lennox; Iowa, S. B. Chase; Kansas, C. V. Mottrem; Kentucky, W. S. Reynolds; Louisiana, Ernest Lewis; Maine, A. J. Fuller; Maryland, Christopher Johnson; Massachusetts, John H. Gilman; Michigan, William F. Breaky; Minnesota, F. A. Densmore; Mississippi, Wirt Johnson; Missouri, H. H. Mudd; Nebraska, R. C. Moore; New York, H. D. Didama; New Jersey, G. T. Welch; North Carolina, Hubert Haywood; Ohio, Starling Loving; Pennsylvania, Frank Woodbury; Rhode Island, W. E. Anthony; Tennessee, J. B. Lindsley; Texas, W. D. Knox; Vermont, A. F. Fassett; Virginia, L. B. Edwards; West Virginia, S. L. Jepson; Wisconsin, E. L. Boothby; United States Army, W. S. Forwood; United States Navy, G. L. Gihon; United States Marine Hospital Service, Walter Wyman; South Carolina, F. P. Porcher; New Mexico, W. H. Page; District of Columbia, William Lee; Delaware, W. Marshall; Oregon, W. H. Carpenter. At the conclusion of the report, which was formally adopted, the following letter from Dr. Austin Flint was read by Dr. Didama:

"GENTLEMEN,—Circumstances render it necessary for me to return to New York. Will you kindly express to our brethren the members of the American Medical Association, with my sincere thanks, an assurance that I thoroughly appreciate the great honor which has been conferred upon me?

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"I accept the honor, feeling assured that I may confidently expect co-operation and indulgence in my efforts to fulfil the duties which it involves.

"Yours very truly,

"AUSTIN FLINT.

"CLEVELAND, OHIO, June 7, 1883."

It having been asserted that Dr. A. L. Gihon, of the United States Navy, was not quite sound in his adherence to the Code, that gentleman addressed a letter to the convention in which he affirmed his strong adherence to it, which was read amidst applause.

On motion, the Secretary was authorized to cast the ballot of the Association for the above list of names, and they were declared unanimously elected.

Fourth Day, Friday, June 8. — Session opened, at 9.30, with prayer by Rev. Charles Terry Collins, the President in the chair.

After some remarks by the chairman of the Committee of Arrangements with regard to the afternoon excursion to River Bank, the routine business was taken up.

REPRESENTATION FOR INDIAN SERVICE.

Dr. N. S. Smith, of Dakota, offered an amendment to the Constitution to provide for the admission to membership of two delegates from the Medical Bureau of the United States Indian service, to be nominated by the surgeon-in-chief of that bureau and approved by the Secretary of the Interior. The amendment was laid on the table until next year.

AMENDMENTS WITH REGARD TO THE OFFICE OF PERMANENT SECRETARY, ETC.

Dr. J. M. Toner withdrew his amendment abolishing the office of Permanent Secretary, inasmuch as that officer had donated the usual appropriation for his services to aid in establishing the Journal.

Dr. Sears offered an amendment, which was laid over, that the chairmen and secretaries of the several Sections be empowered to invite earnest workers to attend their Sections.

An amendment allowing permanent members to vote was indefinitely postponed.

HEARING OF LOCOMOTIVE ENGINEERS.

Dr. Turnbull, of Philadelphia, read a communication with regard to the hearing of engineers, and offered a resolution that the Legislature of each State be petitioned to pass a law requiring railway employés to be examined as regards their hearing before taking charge of any railroad-train. This was, on motion, referred to the Section on Otology, etc.

REPORT FROM THE JUDICIAL COUNCIL.

The report of the Judicial Council was presented by Dr. N. S. Davis. In regard to the petition of Dr. D. W. Day, asking for a rehearing of his case, which was adjudicated last year, the council ordered the return of the petition of Dr. Day, with leave granted to supplement said paper by a written statement of the character of the new evidence which he proposes to introduce, and the council decline to act upon the case until the opening of the session of next year, from the impossibility of notifying all the parties concerned. In the case of Dr. D. H. Goodwillie, of New York, the council decided that the registration of Dr. Goodwillie be cancelled and that the annual dues be returned to him.

SANITARY SERVICE ON OCEAN VESSELS.

Dr. Foster Pratt, of Michigan, introduced a resolution by Dr. A. N. Bell, from the Section on State Medicine, requesting that Congress be urged to consider the importance of a competent medical and sanitary service on board all transoceanic and passenger vessels, and that a committee of five be appointed to promote the object and report at the next session. Referred to a committee consisting of Drs. A. N. Bell, of New York, A. L. Gihon, U.S.N., I. N. Quimby, of New Jersey, H. O. Marcy, of Massachusetts, and Henry H. Smith, of Pennsylvania.

Dr. A. N. Bell then introduced the following resolutions:

READING OF PAPERS.

"*Whereas*, The practice prevails of reading papers before the several Sections at the option of their authors, without sufficient regard to the special objects for which the Sections were created: therefore,

"*Resolved*, That all papers hereafter offered or intended to be read before the Association, or any of its Sections, except the addresses of the President and the chairmen of the Sections, shall be first referred to the trustees of the Journal, for classification and appropriate reference."

The resolution was tabled.

DEATH OF SURGEON-GENERAL BARNES.

Dr. Brodie, of Michigan, introduced the following resolutions:

"*Whereas*, The Association takes a deep interest in the efficiency of the Medical Department of the United States Army; and

"*Whereas*, The late chief of the department, Surgeon-General Joseph K. Barnes, contributed largely to the efficiency of this department in the work which it has been and is doing for medical science and education: therefore

"*Resolved*, That the Association receives with profound regret the information of the death of General Barnes, and desires to record its appreciation of the great value and importance of the work which he has done and enabled others to do for the advancement of medical science.

"*Resolved*, That this Association recognizes the energy and ability which characterized the administration of General Barnes and his services in connection with the Army

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Medical Museum and Library and publication of the 'Medical and Surgical History of the War,' and other works of great value to the profession.

"*Resolved*, That a copy of these resolutions be sent to the Surgeon-General of the army."

These resolutions were adopted and ordered to be spread upon the minutes.

CREMATION A NECESSITY.

Dr. Keller, of Arkansas, offered a resolution that in the very near future, if not now, cremation will become a sanitary necessity in the large cities and populous districts of the country. This was adopted, and, by request, referred to the Committee on Hygiene.

ADDRESS ON DISEASES OF CHILDREN.

Dr. R. F. Blount was excused from delivering his report of the Section on Diseases of Children, and the address was referred to the Board of Trustees for publication without being read.

RESOLUTIONS OF THANKS.

Dr. I. N. Quimby, of New Jersey, introduced a lengthy and effusive series of resolutions of gratitude to the citizens of Cleveland for their hospitality, which were adopted.

It was resolved to tender a vote of thanks to the Secretary and Treasurer for the efficient and satisfactory manner in which they have discharged their several duties.

DELEGATES TO THE CANADA MEDICAL ASSOCIATION.

The President appointed Drs. W. Brodie and H. L. Walker delegates to the Canada Medical Association.

Dr. Eve, the secretary of the Surgical Section, then exhibited an appliance for the extension of the arm, not previously exhibited.

All reports of the various Sections were, by motion of Dr. Brodie, of Michigan, referred to the Board of Trustees for publication in the Journal.

Dr. Atlee, in retiring from the Presidency, said,—

"Gentlemen, I am about to vacate the position with which you have honored me, and in doing so it is with the greatest satisfaction. I had expected to have the honor of inducting into the chair a gentleman who is in every respect most worthy of it, and whose unavoidable absence this morning I heartily regret,—a gentleman who has done as much for the medical literature of the country as almost any other, and one I characterized a few days ago in a very different place,—the Laennec of America. I most heartily thank you for the support you have given me, and I can only say that I hope you will forgive me my shortcomings. I bid you an affectionate farewell."

Dr. Alonzo Garcelon, of Maine, then offered the following resolution:

"*Resolved*, That the thanks of the Association be extended to Dr. J. L. Atlee, the retiring President, for the able, dignified, and satisfactory manner in which he has presided over the deliberations of the Association, and that he retires with the best wishes of every member of the Association for the long continuance of a life so highly useful not only to the present but to all future generations."

This was adopted unanimously.

Dr. Lester, the Second Vice-President, in the absence of the President, announced the Association adjourned to meet in Washington City the first Tuesday of May, 1884.

Owing to the early appearance of the *Journal of the American Medical Association*, containing the numerous papers in full, with the official report of the Sections, we shall not devote space to abstracts of them here. The papers were numerous and fully up to the usual standard.

DR. ANDREW CLARKE ON RENAL INADEQUACY.—In an interesting address recently, Dr. Clarke, President of the Clinical Society, discussed a subject of considerable importance. He has recognized a class of cases in which the function of the kidneys is poorly performed; the urine is not normal in its composition, being of low specific gravity and deficient in solid constituents, especially the nitrogenous elements. This condition may continue through life and impair vitality without being suspected, or it is believed that it may develop into some form of Bright's disease. There are no special symptoms, but if a patient complain of malaise or headache, sleeping poorly, weak and unable to work well, this condition should be suspected and the urine examined; if it be below 1010, in quantity less than fifty ounces, and its proportion of urea below two per cent., then, whether there be albumen or not, whether there be casts or not, whether granular débris be deposited or not, he says that we may know with certainty that the kidneys are not doing their duty. If proper care be taken and compensation made for the defective kidney, the prognosis is not very unfavorable, and the case may attain its allotted term of life. Treatment is pre-eminently hygienic, and in the main identical with that pursued in chronic albuminuria.—*British Medical Journal*, February 24.

ELECTRIC LIGHTING FOR SURGICAL EXAMINATION OF CAVITIES.—Helot and Trouvé have invented a small electric lamp, to be worn in place of the laryngoscopic head-mirror on the forehead. It is connected directly with a bichromate battery, instead of an accumulator, although this may also be used. It is described and figured in *Le Progrès Médical* (No. 17).

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ORIGINAL COMMUNICATIONS.

MEDICAL AND VITAL STATISTICS: ARE THEY RELIABLE?

Read before the Philadelphia County Medical Society, March 28, 1883,

BY PHILIP LEIDY, M.D.,

Philadelphia.

GENTLEMEN,—I have selected for this evening the subject of "Medical and Vital Statistics: are they reliable?" The subject is one of the most important in sanitary science. It has no doubt occurred to some of you that there are defects which might be remedied, and errors discovered which might be corrected, in the system as adopted. As to the statist, as he continues his studies, he will find that his discoveries are not new,—that there are various practical objections to his proposed improvements, and that it is much easier to confine his objections to that which is than to point out clearly and definitely that which ought to be, and which is at the same time demanded. Statistical registration includes the records of all circumstances affecting the production or duration of human life; it includes records of the population living at a given period, also a record of the changes taking place in a community by births, marriages, and deaths; it includes methods of preserving in an authentic and permanent form the memory of facts in pathology "as they occur and furnish material upon which future statists and pathologists will build a comprehensive and definite system of scientific medicine. Our general statistics are made through the system of the census, which, by reason of its magnitude and lack of method, must be imperfect; and authors are so well aware of this fact that general statistics are usually taken *cum grano salis.*"

We have no information that the ancients had any system of registration, although the Jews, Athenians, and Romans had a system by which registration was carried out, though imperfectly. It is stated that in Japan, China, and Peru, information of this character was collected. In Egypt and in Rome records of births in certain families appear to have been kept. But the first steps towards a general registration were taken through the clergy about the beginning of the sixteenth century. The earliest registers were those kept at Augsburg and Breslau, which antedated the order of Lord Thomas Cromwell, in 1538, directing the keeping of parish registers in England. Little attention was paid to these English parish registers until a quarter of a century after, when a peremptory order was issued that such records should be kept in the churches, and, to afford greater security, were written on parchment. In France, in the year 1539, notice and the requirements for registration were required to be brought before the court; and by the seventeenth century such records were in general use in Western Europe. Bills of mortality for the purpose of preventing the diffusion of the plague were issued weekly in London as far back as 1603, and were continued until the present system of registrar-general was established. These bills were under the superintendence of the Company of Parish Clerks of London, first incorporated in 1233 as the Fraternity of St. Nicholas. In 1625, three hundred and ninety-two years later, this corporation obtained a decree from the Star Chamber allowing a press to be kept for the printing of bills of mortality of the city and liberties of London, for which purpose the Archbishop of Canterbury appointed a printer. In 1629 these bills were arranged to show distinction of sex and cause of death. In 1728, about a century after, the distinction of age was introduced, but the distinction of sex was shown only for the total number of deaths, and not for each disease or for each group of ages. So we see that at that early date vital statistics were almost useless,—at least chaotic.

In 1662, John Graunt, Fellow of the Royal Society, published the first treatise on Vital Statistics. The first bills of mortality in which the ages were inserted appear to have been those of Breslau. In 1667, France directed that copies of vital registers should be accepted as legal proof of the facts set forth. About this period the religious wars interfered much with the important system of registration, and it was not until the lapse of one hundred and two years—1685–1787—that Protestant registers were made legal. After the Revolution of 1789 registration passed entirely from the hands of the clergy. The parochial registers of England were exceedingly imperfect. Infants dying before baptism were not recorded; in fact, the best of them showed only burials and bap-

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tisms, not the births or deaths; neither were they kept by all denominations, nor in hospitals or infirmaries having private burial-grounds. This system, though imperfect, was brought to America by the early settlers of New England, and from 1639 to the present time improvements by detail classification have been introduced, so that, notwithstanding there are still imperfections as records, they are generally accepted; not, however, without due allowance.

There are four objects sought to be accomplished by systematic registration of births, marriages, and deaths in a community.

The first is for a legal purpose, being to identify individuals in their relations to their families and to the community, and rests upon the same grounds as that of recording titles of property, etc.

Secondly, for the prevention and detection of crime.

Thirdly, so far at least as births and deaths are concerned, to furnish data for sanitary purposes; that is, to give warning of the undue increase of disease, or death presumed to be, due to preventable causes, and also to indicate the localities in which sanitary effort is most desirable and most likely to be of use.

Fourthly, to collect data for scientific purposes as bearing on the laws of human development,—a registration law which is upon the whole satisfactory in theory not infrequently becoming practically useless, owing to the character of the power selected to supervise its execution. In our own case, the general government should take the matter in hand, and, through an established permanent department regulated by proper Congressional legislation, secure proper vital statistical returns. Most of the States have registration laws, but many of them are inefficiently enforced. Some few years back the duty was imposed upon me to investigate the cases of contagious and infectious diseases officially reported to the Health Department. Cases of varicella were reported as varioloid, and varioloid as true variola,—even cases of eczema, not excluding measles; cases of simple angina as diphtheria. Now, if value is to be placed on statistics, they must be correct. If the inaccuracy just mentioned is the result of indifference, it is censurable; if it arises from the want of knowledge, it is lamentable. These remarks do not apply to our city health department alone: such reports have been reduced to book form by some medical authors, and are given to the general practitioner as a compilation of medical facts based upon research and experience.

It is true that medical men differ frequently in their opinion, and certainly have a right to, when theory is the foundation for argument; but, when facts are demonstrated, let us acquiesce, no matter what original theories we are loath to give up.

As an illustration, I will take the disease diphtheria. The recent information with regard to the existence of that dreaded disease in our midst makes it appear that it prevails to an alarming extent. The lines have been so well defined that the connecting link has made its existence seemingly general throughout the city. I ask the question, Does diphtheria prevail to such an alarming extent as reported? From past experience, referring to the manner reports are made to the Health Department, and from information I obtain from active practitioners, who are reliable, I doubt it. That diphtheria is a distinct disease is questioned by many physicians high in authority. Reynolds, by Hartshorne, says regarding croup and diphtheria, "The opinion that membranous laryngitis, or tracheitis, 'true' croup, is a distinct disease from diphtheria has been supported by Prof. G. B. Wood, Austin Flint, J. Lewis Smith, Fordyce Barker, and others." Dr. J. F. Meigs contends against it. Besides these named abroad, C. West, Virchow, Niemeyer, Oppolzer, and Letzerich may be cited as favoring the doctrine of the *non*-identity of the two diseases. They all have their following. A table is given in Meigs and Pepper's Treatise on the Diseases of Children, which shows that after diphtheria had about 1860 become recognized in Philadelphia as a new disease, at that time the mortality from it had added for several successive years more than three hundred to the deaths in each year in that city, while the deaths from croup continued to number annually, as before, from two hundred to over four hundred. The foregoing is the difference made with croup. Now, when we refer to scarlatina in its second and third form we have still greater difficulty in getting at the proper record. In turning to the number of deaths from scar-

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let fever and diphtheria, we singularly find them running hand in hand together: where scarlet fever is found diphtheria is near at hand,—yes, under the same roof. So with diphtheria. Refer to Board of Health returns, 1860–81 inclusive.

To give a reason for such uniformity would be only to speculate with the difference of opinion as regards the identity of the two diseases.

The physician who makes no distinction and pronounces his cases croup,—probably scarlet fever,—and the one who professes to recognize the difference and reports his cases accordingly, certainly tend to produce confusion and doubt.

Whilst there are, I regret to say, physicians who conceive it a matter of importance to elevate themselves in the estimation of their patients and friends by magnifying the disease under treatment, so there are others who, to relieve the distress and anxiety of devoted parents or anxious friends, resort to the opposite, and report accordingly, unless death takes place. When the cause is correctly assigned, call disease by its proper name. It is the law, and the success of our medical labors is thereby determined. As the question of identification as regards croup, diphtheria, and scarlet fever is still in the balance and unsettled, the records certainly must be unreliable as regards classification. As stated before, I have known chicken-pox represented as smallpox (aborted *à la* Hahnemann), and a neighborhood up in arms with excitement. So I have known cases of simple angina by the score pronounced diphtheria. A prominent dupe of the Hahnemann doctrine stated to me the success of his treatment of diphtheria,—that his cases recovered in a few days. To my utter astonishment, the same remark was made to the late Home Office in my hearing by a prominent physician. Let me say here, diphtheria does not get well in a few days, any more than the scarlet fever, smallpox, or typhoid fever. It is turning science into ridicule, and making a mockery of our profession. Colleagues, give all such expressions from members of the profession your positive disapproval. It is done for no honorable purpose. In our statistics of variola I have failed to find any classified statement including varioloid. We have accepted the great obstacle to compulsory vaccination in this country. The time has not arrived when such an arbitrary step can be taken, and until the general government takes the matter in hand we are powerless. Yet it is all-important that the community should be impressed with the necessity of the protective influence of vaccination. Towards accomplishing such an end there should be furnished *locality statistics*, to refer the laity and others who happen to be sceptical. No better opportunity was afforded, and still continues, though in a less degree, during the existence of variola, for our own people in our own city to secure such a record. Cases of variola and varioloid are reported to our Health Office, no difference is made; they are all placed under one head,—"variola." The reports are pigeon-holed,—neither useful nor ornamental. Unless interference is required, such as sending the patient to the Municipal Hospital, disinfecting the premises, etc., the whole matter as at present carried out is farcical. Now, if the protective influence of vaccination is in extent what is claimed for it, no better evidence could be given to the public than the number of protected cases, or modified variola, as compared with the number of cases of the true disease.

Statistics, as regards this disease alone, as emanating from health boards, are in a great degree unreliable, rendered so by the careless manner the reports are furnished; and, as the discrepancy holds good in this special disease, they no doubt do in others. There should be a commission of medical men appointed, who should have discretionary power to deal with all such matters as contagious and infectious disease where the health and business interests of a large city such as ours are involved. By referring to the health of English towns, we find diphtheria and scarlet fever come in for their share, also in Scotch towns, also Dublin, also Calcutta; but what a significant absence of the disease croup! Also in the general statistical returns, which the *Lancet* states are "remarkably incomplete," and further on states that more precise mortality statistics should be forthcoming for such a city as Calcutta, which has a population little short of half a million of persons. "We are, unfortunately, still ignorant of the conditions essential to the development, and to some extent to the spread, of diphtheria; and with a view of acquiring further information as to its etiology, both the local

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and government boards and the British Medical Association have instituted a series of detailed inquiries, the results of which may, it is hoped, hereafter give some indication as to how the diphtheria mortality may be lessened." (*Lancet.*) Now, it becomes the individual members of this and the other medical societies to urge upon the proper authorities the appointment of a commission to investigate disease in general, regarding causation, prevention, etc. Let there be light! I grant that it is difficult many times to reconcile difference of opinion; but where facts are pronounced such an important reference as the present subject should be carefully guarded. One word in regard to births,—one of the most important divisions of vital statistics. I have from time to time within the past fifteen years reported many cases of births where no midwife or other person having knowledge of the registration law was present,—the cases coming under my notice incidentally. How many are not reported? To give you an idea of the manner this part of the duty of the physician and others is performed, I will read an extract from a home journal: "According to their registration reports, the deaths in the city of New York continue to exceed the births. For the last year, 1882, the respective figures are thirty-seven thousand eight hundred and twenty-six deaths to twenty-seven thousand three hundred and twenty-one births (being ten thousand five hundred and five more deaths than births)." At this rate the metropolis would die out if it were not for accessions of immigrations. But the fact is, these birth-registrations have nothing in the value of accuracy about them. Ours in Philadelphia have been defective enough, on account of the default of doctors and midwives to report births to which they are professionally called. Medically and legally the system is wrong by its leniency. Therefore, our own reports are made incomplete. Of certificates of causes of death, as usually furnished, a certain proportion are worse than useless, since the cause is erroneously stated. This may be due either to a desire to conceal the true cause from the family, as in cases of syphilis, suicide, alcoholism, etc., or to carelessness and erroneous diagnosis. In many cases, post-mortem examination reveals little, by reason of the lack of knowledge of pathology.

Pathology, as taught in our medical schools, is deficient in its system, and, unfortunately, difficult to remedy at once. Much has yet to be known of cause and effect as applied by the investigator for our guidance. I have maintained for years that practical and pathological anatomy should not be separated, but advantage taken of every pathological condition which presents itself in the dissecting-room. Well persons only die by violence; hence your material is abundant. No work was ever published where more care and pains were observed than in the "Medical and Surgical History of the War of the Rebellion." Dr. Otis, in his report to Surgeon-General Barnes, June 30, 1867, says, "At the present day surgical statistics commonly encounter severe criticisms, and the results of the numerical method of medical and surgical investigation are viewed with distrust. In the collection of surgical statistics there are several special sources of fallacy. The desire for distinction of ambitious operators sometimes tempts them to report successful results prematurely, and to fail to record unfortunate cases. Feverish partisans of particular operative procedures in accumulating statistics not unfrequently evince an unpardonable disregard for the fundamental rules of evidence, and admit testimony abounding in transparent fallacies." As Dr. Otis once remarked, it was an easy matter to manufacture cases, especially for occasions and publications.

Colleagues, I have occupied your time with a subject which may appear to you at first novel and as dry as the study of dry bones to the student; but you must recognize the importance of *correct* statistics, and how unreliable they are as furnished.

THE PRESENT STATE OF THE TUBERCULOSIS QUESTION.

REMINISCENCES FROM A PILGRIMAGE TO THE MEDICAL CENTRES OF GERMANY.

BY HENRY WILE, A.B., M.D.

WHAT is phthisis pulmonum? This question reaches far back in the history of medicine. The medical leaders of every generation since the age of Hippocrates have given some answer. Each school has set up its theories, which under the light of more recent investigation were

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overthrown and replaced by new ones. New theories were proposed as fast as old ones were discarded: so that the question has grown, and its literature has assumed vast proportions.

Surely there is no other subject of such importance in all the range of pathological lore,—no other so vital to the interests of humanity.

The answer of Hippocrates was that it developed from the *ulcus pulmonum*. This answer was received, with various modifications from time to time, until late in the seventeenth century, when Sylvius described the *tubercle* in the lung of phthisis.

The development of these bodies was then studied, and it was found that some soften and give rise to cheesy masses. As the cheesy masses were also observed to be a common result of inflammatory processes in scrofulous persons, the theory arose that scrofulosis and tuberculosis were closely related. Laennec (quoted after Spina, p. 6) regarded them as identical processes, because the products of both were cheesy, and he called scrofulosis tuberculosis of the lymphatic glands. This theory has its supporters to-day. Experienced clinicians, having the medical care of families, are continually showing some nexus. But later Virchow pointed out that cheesy degeneration could take place in the most varied pathological processes,—tumors of various kinds. He regarded it not as peculiar to scrofulosis or tuberculosis (*Virch. Archiv*, i., 1847).

Then the question was subjected to a microscopic investigation. The structure of the tubercle was examined, and it was found to consist of cells with an intercellular substance. Subsequently giant cells were discovered in the tubercle,* and this was held by some to be characteristic; but they were afterwards found elsewhere.

Then it was noticed that the disease was not local, but constitutional; that it may affect not only the lungs, but each and every organ of the body; that it may affect any organ singly or every organ at the same time.

But investigation thus far threw little light upon the true question.

Then began the work of experiment. Villemin, of France, inoculated rabbits with tuberculous matter, and, gaining positive results, is regarded as the first who placed tuberculosis in the category of infectious diseases. But it was soon found that other and innocuous substances injected into rabbits and guinea-pigs gave similar results. Then came Waldenburg with a most important discovery,—namely, that finely-powdered innocuous substances especially gave rise to tuberculosis in the rabbit. In experimenting on animals it was found that it made a great difference what kind of animal was used; that rabbits or guinea-pigs were rendered tuberculous by simply exciting a suppurative inflammation in them without the introduction of foreign bodies, while in other animals, dog or cat, under certain conditions no amount of irritation or inoculation could produce tuberculosis. From this it is evident that the element of predisposition enters into the question; and there can be no doubt but that among human beings some persons are more predisposed than others. This idea has of late been much discussed, and Dr. Formad, having carried on a great number of experiments on different subjects during a succession of years, has made the observation that certain kinds of animals respond to traumatisms and inoculations more quickly than others,—that some are but little disturbed by violent attacks upon their natures, while others succumb to the slightest interference. He has also made the observation that animals kept in close confinement and fed on innutritious diet could be rendered sensitive. Upon these observations, he divides animals into two groups, —scrofulous and non-scrofulous,—analogous to similar conditions in the human being.† This will be referred to later.

Cohnheim and Fraenkel (quoted after Spina‡) also made an extensive series of experiments in Berlin, in 1869, similar to those of Waldenburg. Inoculating animals in the peritoneum with tuberculous and with innocuous material, and succeeding in producing tubercles in both cases, they declared themselves against the theory holding tuberculosis as an infectious disease. Later these gentlemen repeated their experiments in another city,—also changing the point of inoculation from the peritoneum to the anterior chamber of the eye. This time they declared that they produced tubercles with the inoculation of tuberculous matter only. Thus they changed their opinions,

* Friedländer, Virch. Arch., Bd. lx., 1874; also Griffin's Med. Centralblatt, 1875.

† Cornil and Ranvier (1880, p. 112) hint at this.

‡ Spina, Studien über Tuberculose, Wien, 1883.

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and regarded tuberculosis as infectious. Cohnheim explains the fact that the animals inoculated with innocuous matter in the peritoneum died of tuberculosis in Berlin, not on account of the inoculation, but on account of being infected by other tuberculous animals in the Pathological Institute. Yet how does he know or can he prove that? The explanation is as unwarrantable as it is unscientific. Can he point to a single case on record where an animal, without being injured or inoculated, died of tuberculosis simply from cohabitation with other animals that were inoculated with tuberculous matter?

Then, again, his experiments on the eye are unreliable,* as Hänsell inoculated rabbits in the anterior chamber of the eye with pus from syphilitic gumma, and produced tubercles of iris, lung, and liver. This was confirmed by Spina.

Buhl,† in an extensive series of experiments, always finding tuberculosis associated with inflammation of cheesy or purulent character, set up the theory that tuberculosis was an auto-infectious disease, caused by absorption of cheesy matter.

Niemeyer gave a practical interpretation to the experiments of Buhl. He considered tuberculosis *per se* not hereditary, but secondary to chronic inflammations. The diathesis in which inflammations assume a chronic low grade he considered as hereditary. Yet experiment showed that tubercles could be produced primarily.

Dr. Foulis (*Glasgow Med. Jour.*, 1875) injected powdered cork and cinnabar into the peritoneum of guinea-pigs, and produced tuberculosis. Waldenburg, quoted above, also produced tuberculosis by injecting indifferent innocuous substances into animals. Orlando Robinson (Inaugural Thesis, University of Pennsylvania, 1881) did the same, and had similar results. Bernhard (quoted after Spina, p. 53) inoculated rabbits with tuberculous matter, and not seldom had negative results. I can quote any number of experimenters who inoculated with innocuous material and had positive results.

Within the past few years much attention has been devoted to the experiments in which animals are made to inhale atmospheres charged with foreign elements, and it has been found that inhalations of sputum from phthisical patients produced tubercles in the lungs of the animals.

Yet Knauff (quoted after Spina, p. 57) obtained the same results by having the animals inhale coal-dust; Inis (quoted after Spina, p. 57), by using stone-dust and lamp-black. This agrees well with the discovery of Waldenburg, that finely-powdered substances especially give rise to the formation of tubercle. Klebs (*Prag. Med. Wochenschrift*, Nos. 42, 43, 1877) was the first to announce that tuberculosis was caused by the presence of a bacterium, to which he gave the name *monas tuberculosum*. But the work was in no way thorough, and attracted little attention. Robert Koch (*Berlin. Klin. Wochenschrift*, No. 15, 1882) was the first to excite the attention of the medical world by the discovery of a bacterium which he claims acts in tuberculosis as the causative agent, and to which he gave the name *bacillus tuberculosis*. The bacillus differs from the *monas tuberculosum* of Klebs, in that it is slender and rod-like, while the latter is round.

Koch claims that the *bacillus tuberculosis* is always present in tubercles, and often in the sputum of tuberculous patients; that the bacillus can be cultivated in sterilized blood-gelatin, and that animals inoculated with the product of these cultures become tuberculous, and in the tubercles the bacillus is found; that the bacillus is found in tubercles of tuberculous monkeys and chickens, and in the lesions of pearl-disease of cattle, from which he concludes that these diseases are identical with tuberculosis of man.

He also claims that the bacilli give a peculiar reaction when subjected to a particular method of staining.

Spina‡ claims to have gone very carefully over the work of Koch, and says that the staining-reaction is not peculiar to the tubercle bacilli, but that the bacilli, as well as all other known cells of the animal and vegetable world, after being stained blue can be decolorized and stained brown by vesuvin. This was first pointed out by Dr. Formad, in a lecture on this subject before the Philadelphia County Medical Society, October 18, 1882.

Spina (Experiment 26) also maintains that staining sections of tubercle according to Koch's method produced blue rods; then staining the same sections according

* Quoted after Spina, p. 50.
† Zeitschrift für Ration. Med., 1857.
‡ Studien über Tuberculose, Wien, 1883.

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to the method of Ehrlich produced other rods two-thirds shorter.

Thus, he thinks that the bacilli produced by both these methods are not the same,—at least not morphologically.

Furthermore, he claims to have found the bacillus of Koch in other than tuberculous lesions,—in croupous pneumonia, in bronchiectasia, and in pus from a trauma on a rabbit's ear.

The final conclusion of Spina is that the bacilli are not constantly present in tubercles, and are never present in tubercles of serous membranes.

Spina's work gave negative results; and, as the methods employed by this gentleman do not correspond with those of Koch, it is not surprising that his results should be different. The fact that he found no bacilli in tubercles of serous membranes does not exclude the possibility of there still being some present. The question is not in regard to their presence, but in regard to the meaning or purpose of their presence. That they are uniformly present in the lungs of tuberculous patients is, it seems to me, well enough established. But the relation they bear to the lesions of tuberculosis, that is the disputed point. Are they the cause or the concomitant? That is the question awaiting an answer.

All experimental investigation thus far carried on with a view of establishing the infectiousness of tuberculosis has failed. The results of the experiments are contradictory, and, so far as we now know, in accordance with no general laws or system. Dr. Belfield, referring to this subject in a lecture printed in the *Medical Record* for March 10, 1883, says, "The supreme question before that portion of the medical world including Virchow, Cohnheim, Billroth, Bamberger, and others, is not whether tuberculosis is infectious, but whether the bacillus of Koch is the infective agent." That Prof. Virchow accepts tuberculosis as infectious is something new, and he must have changed his mind—which I doubt—since last summer, when I heard him lecture.

I heard Prof. Stricker, of Vienna, in a lecture on this subject, last February, speak in very decided terms against the infectiousness of tuberculosis as being established. I am yet to hear that Recklinghausen of Strasburg, Rindfleisch of Würzburg, or the French pathologists Cornil and Ranvier, accept this as a settled fact.

Dr. Belfield says also that tuberculosis is produced by inhalation of tuberculous sputum, and by nothing else, and by the introduction of minute particles of tuberculous matter, and nothing else, in the eye.

But the experiments of Knauff and Inis with coal-dust, lamp-black, etc., and the experiment of Hänsell (above quoted) with syphilitic pus, show that this is all a mistake.

Some, however, contend that tubercles produced by other than tuberculous matter are not the genuine tubercles. Yet macroscopically and microscopically they are, so far as histologists now know, identical. What better criterion than the anatomy have we at present to classify objects and prove their identity or non-identity? Thus, if a bit of finely-powdered glass produce anatomically the same pathological condition as a bit of tuberculous material, we cannot conclude that the effect is the result of an infectious cause.

We may draw the closest analogies between the clinical histories of tuberculosis and other infectious diseases, and the results will be more of interest than proof. Analogy, at best, is a poor mode of reasoning, and cannot stand against facts established by experiment.

Therefore, if the discovery of Koch be confirmed, it will settle two questions at once,—*i.e.*, the infectious nature of tuberculosis, and the nature of the infection.

It may be urged that as in an epidemic of smallpox or diphtheria some individuals seem to possess an immunity, while others contract the disease readily, the same holds true in tuberculosis,—*e.g.*, the bacillus finds suitable conditions for its development only in such individuals as are predisposed. Yet we know absolutely nothing respecting the cause of smallpox or diphtheria, and we can with equal justice assume that such individuals who escape in an epidemic do not become infected.

In the Middle Ages, when syphilis spread with such ravages over Europe, there were doubtless many persons who did not contract the disease; and in modern times, under the light of our knowledge of this disease, we know just wherein such immunity existed.

If tuberculosis be an infectious disease, especially if it be caused by the *bacillus tuberculosis*, the disease must follow its inoculation on man or animals with the constancy of a physical law. Syphilis, though it seems to be confined to the

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human race, has no predisposing element which favors or disfavors any inoculation with the syphilitic contagion. All mortals are on the same footing, all alike subject to consequences that are sure to follow every infection.

It is natural to think that, as the tuberculous lung is the seat of the breaking down of tissue with a large surface exposed to the air, these minute parasitic particles, coming from without and finding a suitable soil, continue to live and develop in this scene of degeneration. On account of the structure of the lung, surely, no one can tell, from a microscopic examination of a section of tuberculous lung, whether the bacilli present come from the atmospheric side of the alveolus, or arise in the tubercle.

It is probable that they do come from the atmosphere, but do not find in all individuals proper conditions for development. It is also a fact that Koch did not always succeed in producing tuberculosis with bacilli from cultures. This again brings in the element of predisposition, which, it seems to me, is a great objection to holding the bacilli as the cause.

This element of predisposition has lately received some anatomical support through the labors of Dr. H. F. Formad. This gentleman, in a recent investigation on the etiology of tuberculosis, has shown that the lymph-spaces of scrofulous animals are fewer and narrower than in healthy animals, and, besides, that they are crowded with small cells. This same condition Dr. Formad holds to exist in regard to the lymphatics of human beings. This observation, by the way, has been favorably regarded by histologists abroad. These narrow lymph-spaces may have some relation to the discovery of Waldenburg, given above, that finely-powdered substances especially give rise to tubercles, by first blocking up these lymph-spaces.

But the interpretation of these observations and their relation to the etiology of tuberculosis are not yet clear.

Notwithstanding all that may be brought forward, it must be admitted that Koch has found in the sputum and in the cavernous excavations of tuberculous lungs something very important; but the true explanation of the discovery lies still in the future.

At present the views of Koch are received by some able clinicians, but not one of the leading pathologists of Europe indorses them; on the contrary, I have heard several even ridicule them.

In Europe Dr. Robert Koch is regarded neither as a pathologist, a mycologist, nor an histologist, but as a man having great practical talent for experimental work and characterized for his sharpness of observation. Thus far only two experimenters have gone over his work, and both have failed to confirm it: so that the whole question relating to the etiology and nature of tuberculosis is still an open one.

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TRANSLATIONS.

The Effects of Tannate of Sodium in Chronic Nephritis.—Lewins's recommendation of the tannate of sodium for the reduction of albuminuria in chronic renal disease, although apparently sustained by the physiological experiments made by Ribbert, recently failed in a trial of it in Dr. Mosler's clinic, the results being reported by Dr. E. Briese (*Deutsches Archiv für Klin. Med.*, May, 1883). In four cases, in which daily estimation of the percentage and total excretion of albumen were carefully recorded, the sodium tannate was used (a two-per-cent. solution of tannic acid neutralized with bicarbonate of sodium), a tablespoonful being given every two hours. The remedy was not equally well borne by the patients: some could take it continuously for a month, while others had gastro-intestinal disturbances within a few days, and in others every increase of dose produced vomiting. These observations were restricted to chronic nephritis; but in the four cases observed the daily excretion of albumen was not diminished, and the nephritis steadily pursued its course; the patient's general health suffered, extensive œdema appeared, and symptoms of uræmia completed the clinical picture, in spite of the continuous administration of the remedy.

Treatment of Apoplexy.—In a recent discussion upon venesection in apoplexy, before the Société de Thérapeutique, Dujardin-Beaumetz opposed bleeding. He said that in apoplexy there is ordinarily a cerebral congestion, or a hemorrhage, or an anæmia: in the last two cases, which it is almost impossible to distinguish clinically from the other, resulting as they do from

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vascular lesions, bleeding should not be employed. Venesection to suspend a hemorrhage, logically, should be pushed to syncope; without this it is useless. In anæmia it is irrational, and, moreover, would have no influence upon the vascular lesions and arterial obstruction which are the efficient cause of the cerebral disorder of circulation. The utility of bleeding even in cerebral congestion, or the "rush of blood" of older writers, is, to say the least, disputable, while in anæmia and hemorrhage it is dangerous and useless. Whenever a hemiplegia persists, no matter how slightly, for twenty-four hours, we may rest assured that it is not simply due to cerebral congestion, but to a hemorrhage or local anæmia.—*Revue de Thérapeutique.*

ICHTHYOL.—Unna (*Deutsche Medizinal Zeitung*, No. 17) considers that in ichthyol (a mineral containing ten per cent. of sulphur) we have an agent for the local treatment of acute and chronic joint-affections of a rheumatic character, more useful than any similar agent: it is an anti-rheumatic remedy of the first rank. In skin diseases it has also been employed with success. For local use a ten to fifty per cent. combination with petrolatum has been used with much satisfaction in stiff and painful rheumatic joints, and it proves a useful addition to the salicylic acid treatment. It may be also used as a solution or a spray in muscular rheumatism, catarrh, and laryngeal phthisis.

℞ Ichthyoli puri, 10;
Ol. ricini, 20;
Spiritus, 100.
M.

or

℞ Ichthyoli, 5;
Ætheris, spiritus, *ana* 50.)

Occasionally superficial inflammation of the skin is caused by the remedy (sudamina, miliaria rubra), or an artificial dysidrosis; but this need not interfere with the treatment. Warm baths and internal medication by salicylic acid are not to be neglected. These local applications have also given great relief in gout.

CORROSIVE SUBLIMATE IN THE TREATMENT OF DIPHTHERIA.—Kaulich (*Bull. de la Soc. de Méd. de Gand*) has used in a number of cases corrosive sublimate, both locally and internally, in the treatment of diphtheria. He treats the exudation in the nose, the mouth, and the throat by applications of a solution of 1 in 2000. Among cases of infants that have had tracheotomy performed, the trachea is painted with the same solution four times daily, or even every two hours. Inhalations were likewise ordered of .005 in 1000 fifteen minutes at a time, repeated every hour or less frequently, according to the case. Internally, he gives to children one or two centigrammes (gr. $\frac{1}{6}$–$\frac{1}{3}$) daily in albumenized water containing a little cognac and sugar. Warm applications to the outside of the throat are likewise made.—*Bull. Gén. de Thérapeutique*, April 15.

UROSEÏN—A NEW COLORING-MATTER IN THE URINE.—Neucki and Lieber (*Journal für Prakt. Chemie*, N. F., xxvi.) have found in the urine of a diabetic, as well as in other pathological urines, a coloring-matter which in its chemical characters resembles rosaniline. In order to detect its presence, 100 c.cm. of urine with 10 c.cm. of a twenty-five-per-cent. solution of sulphuric or hydrochloric acid are mixed in a test-tube and shaken gently with amylic alcohol; the uroseïn, if present, will give a rose-color to the alcohol and urine. It gives a characteristic absorption-band (between D and E) in the spectroscope.

PROLONGED ANÆSTHESIA BY NITROUS OXIDE.—M. Bert recommends the following method of obtaining insensibility by nitrous oxide for surgical purposes. The pure nitrous oxide is to be inhaled for one minute; then a mixture is to be substituted of oxygen (twenty per cent.) and nitrous oxide (eighty per cent.) for five minutes; when this is to be followed for one minute by the pure gas, and again by the mixture, —this being repeated as long as it may be considered desirable.—*Proc. Soc. de Biologie; Le Progrès Médical.*

HYDROCELE CURED BY ERGOT.—An injection of two drachms of fluid extract of ergot, in mistake for iodine, into the sac of a hydrocele, produced no inflammatory reaction, and no pain, and the hydrocele did not return. Subsequently two other cases were treated successfully in the same way by Dr. Walker.—*La France Médicale.*

HYSTERICAL CONTRACTURE AND PARALYSIS.—Huchard entirely relieved an hysterical contracture of the forearm by the application of an elastic bandage.—*Revue de Thérapeutique.*

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PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, JUNE 16, 1883.

EDITORIAL.

THE MEDICAL SOCIETIES.

THE annual epidemic of meetings of medical societies in which our readers are interested has just closed, and in order to complete the records of its ravages we have slightly delayed this issue of the *Times* so as to present them in full.

Everywhere good-fellowship has been encouraged and strength given to the bonds which ought to unite all capable and honest practitioners. As a scientific body the National Surgical Association has been most successful and laudable in its efforts: perhaps we should say it has achieved practical artistic rather than scientific success, for art in surgery, and pre-eminently in American surgery, is more than science. How few surgeons are scientists, and how few doctors are artists! It is a surgeon that wields the most skilful of modern etching-needles; it is a surgeon noted for his urethral lore who is the first amateur painter of Great Britain; and if in Vienna a great picture is to be criticised or a doubtful identity determined, to whom do men turn except to Billroth, *facile princeps* alike in surgery and in art criticism?

When scientific work is required, it is the doctor that is called. On whose brows among us do scientific laurels rest, if not upon those of Dr. S. Weir Mitchell? No surgeon has ever been elected into the National Academy of Science,—that body which in theory, and, to a great extent, in actuality, represents the best scientific talent of the country.

But we are wandering from our subject,—wandering, however, with the aimless freedom of holiday, amusing ourselves because there is very little left for us to say, so well and so thoroughly has our reporter done his work. We cannot, however, close without a word of praise for the dexterity which was shown at the American Medical Association in so strangling all ethical rebels that none of them succeeded in crossing the sacred Æsculapian threshold, and the shades of Hippocrates suffered no dishonor, no distress over unseemly bickerings and disputings.

LEADING ARTICLES.

MIDZU AMI, OR JAPANESE EXTRACT OF RICE.

THIS is a nearly colorless, or slightly yellowish, transparent, tough, jelly-like substance, of a sweet taste, and very delicate, pleasant flavor. The following letter was written to Dr. S. Weir Mitchell, in answer to inquiries, by Dr. J. C. Berry, of Okayama, Japan:

OKAYAMA, JAPAN, March 30, 1883.

MY VERY DEAR SIR,—Your note of inquiry concerning *midzu ami*—"what it is, and how it is made"—was duly received, and I deeply regret that I have been prevented from replying thereto until the present time. I could have told you *what it is* at once; but *how it is made* was not so familiar to me; and it has been the acquisition of this information that has caused the delay in writing. During the last three or four years there has sprung up quite a demand for *midzu ami*, so that manufacturers have been vying with each other to produce a superior article; and any inquiries as to its manufacture have always been treated with such evasiveness as to lead me to question if my inquiries were truthfully answered. There was one man acquainted with its manufacture, however, whom I knew I could trust and who would be glad to answer my questions. Unfortunately, he has been away from home much of the winter, and on his return was sick for some time. From him I now learn as follows:

"*To make Midzu Ami.*

"1st. Malt (*moyashi*). This is made by putting barley into a pail with a perforated bottom, and moistening with water for two weeks, by which time (varying with the weather) the barley germinates. Then spread and dry, after which rub off the sprouts, winnow, and grind, when it is ready for use.

"2d. Take of *mochi gome* [a very glutinous rice, from which *mochi*, a kind of bread, is

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made by simply cooking the rice and then pounding in a mortar] one *to* [a *to* is one quart, one pint, and half a gill, imperial measure]. Cook the rice by steaming in a wooden box until moderately soft. Remove to a pail, and add—malt 450 *momrue* [100 momrue = 1 lb. Troy], and five *sho* of water [= ½ *to*]. Then with the hands thoroughly mix the whole, squeezing and crushing the rice until it assumes a hard jelly-like consistence. Then allow to remain for twelve hours, during which time stir three times. (If the weather is very cold, cover with straw mats; if too warm, keep in a very cool place.) Remove, and place in hempen bags, put into a strong box, and press out the liquid with firm pressure. Then put into a pot and evaporate to proper consistence over a slow fire."

I would add that this *mochi gome* is much richer in gluten than the rice habitually used by the people, though this latter is much richer in gluten, and has less starch, I am told, than the Chinese rice. I am now having some tin boxes made, to send samples of tea, seeds, etc., to friends by mail, and on their completion will send you a box of *mochi gome* for analysis, if you care to take the trouble. The barley is very like our home barley, and possesses nothing peculiar. It is only used as malt. You will notice that there is about ten times the amount of rice (*mochi gome*) that there is of barley.

I use the *midzu ami* in my practice in all cases where food-medicines are required, and frequently prescribe it with dialyzed iron, or with cod-liver oil, after being properly diluted. It has always been regarded by the Japanese as an article of diet, and not until recently has it been used as a medicine; and even now this is confined to the foreign physicians in Japan, or to the young Japanese physicians educated by foreigners. I use it on my table as an article of diet, instead of syrup or honey, especially with one of our children who has a weak stomach; and with it even I can eat hot buckwheats in the morning! I imagine that its one single advantage over "malt" or "maltine" is its more easy digestibility; but this you will be able to judge of better than I.

YELLOW FEVER IN BRAZIL.

BY order of the Brazilian government, the Professor of Organic Chemistry of the Faculty of Medicine of Rio de Janeiro, Dr. Domingos Freire, is continuing the work begun in 1880 upon the cause, nature, and treatment of yellow fever, especially in regard to the existence of any peculiar microbes, their cultures, and the effects of attenuation and of anti-zymotic remedies upon them.

To three students a monthly stipend of reis 120$000 (about sixty dollars) is allowed, to aid in these studies in the maritime hospital of Santa Isabel.

As a primary result of his studies, Prof. Freire has sent a communication to the *Journal Officiel de l'Empire de Brésil* (May 8, 1883), in which he states that he took in the cemetery Jurujuba, where the deceased persons from the maritime hospital of Santa Isabel are buried, a little of the soil from beneath the grave of an individual who died of yellow fever one year ago. In its aspect, odor, and other external characters, this soil presented nothing abnormal. But microscopical examination with a power of seven hundred and forty diameters revealed the presence of myriads of microbes absolutely identical with those in the black vomit, in the urine, blood, and other organic liquids, of patients seized with yellow fever,—that is to say, cells of *Cryptococcus xanthogenicus* in different stages of development.

A great number of these organisms executed spontaneous movements. Yellowish masses, protruding from the pigmentary substance of the cells, full of granulations, and some other black particles, débris of *Cryptococci*, were also seen. Finally, there were observed vibriones moving with rapidity.

These observations, which have been verified by MM. Chapot, Augusto Cesar, and Caminhoa, clearly show, says Prof. Freire, that the germs of yellow fever perpetuate themselves in the cemeteries, which are equally *pépinières*, where new generations, destined to devastate our city, are elaborated. After passing through the porosities of the earth, these germs disperse themselves in the atmosphere; others are carried by the torrential rains to the streets and squares, and, finding there a centre favorable to their evolution, they provoke the invasions of the epidemics in the summer, the season most propitious for their proliferation.

The presence of the *microbes* of yellow fever in the cemeteries corroborates in every way the observations of Pasteur made relatively to the *microbes* of malignant pustule.

To prevent the spread of yellow fever, the professor proposes cremation of all persons who die of the disease.

F. P. NOVAES.

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NOTES FROM SPECIAL CORRESPONDENTS.

CINCINNATI.

PURPURA HÆMORRHAGICA was diagnosed as the cause of death in two cases where subsequent revelations point to the deadly *purpura variolosa*. It is so unusual to confound these two diseases that none of our books call attention to the differential diagnosis.

The first case happened in the Cincinnati Conservatory of Music, an institution where young ladies receive musical education and boarding in the same building. The attending physician, Dr. B. F. Miller, is a gentleman standing high in the profession, having at one time been surgeon to the Cincinnati Hospital. His consultants were Dr. J. P. Walker, formerly physician to the Smallpox Hospital, and Dr. Comegys, now on the staff of the Cincinnati Hospital. These eminently qualified practitioners decided that the case was one of *purpura hæmorrhagica*, and that *pyæmia* was the immediate cause of death, and so signed the death-certificate. The body was removed to Robinson, Illinois, and there interred. Subsequently smallpox developed in the Conservatory of Music and at Robinson, Illinois, and several deaths resulted. The attending physicians state that there were no papules, vesicles, or pustules anywhere on the body during the whole course of the disease. There were free hemorrhages from all the mucous membranes, and purpuric extravasations all over the body.

The press of the city and some ignorant doctors had a great deal to say about the attending physicians, but the body of the profession stood up to them nobly,—two of the most eminent physicians in the city coming out in a card expressive of their sympathy, and recounting a similar mistake in their own practice some years ago.

Hardly had the talk about this case ceased, when Dr. De Courcy, a physician of large practice in the West End, signed *purpura hæmorrhagica* as the cause of death of one of his patients. The Health Officer was suspicious of the case, and had the coroner order a post-mortem. Dr. E. W. Walker, Pathologist to the Cincinnati Hospital, performed the necropsy, and stated that *purpura variolosa* was the *casus morbi*. He stated that he found several distinctly umbilicated pustules. Dr. De Courcy has come out in a card, which has been replied to by Coroner Muscroft, and still they are not satisfied.

Cincinnati Board of Health.—The Superior Court refused to appoint a Health Commissioner, and the courts have decided that the present Board of Health is done away with: so that now we have no Health Department to our city government. Steps are being taken to force the Superior Court to carry out the law, and until that is done we will enjoy an interregnum.

Quacks.—A bill was recently introduced in City Council to provide for a wholesale purging of the medical profession of our city. It is hoped that the city may be freed from the host of quacks who now flaunt their brazen advertisements in our most public streets. One man has the effrontery to advertise to "remove *all* obstructions to menstruation, from *any* cause," and doubtless has plenty of the work to do.

Trephining the Thorax.—In the Cincinnati Hospital, lately, your correspondent was present, by invitation, to witness the trephining of the thorax for empyæma by Dr. N. P. Dandridge, Surgeon to the Hospital. Dr. D. took a button from the seventh rib of the left side, and then enlarged the opening with the bone forceps. A silver tube for permanent drainage was inserted. The whole operation was performed under the spray, and the wound dressed *à la* Lister. Dr. Dandridge carries out the minutiæ of the Lister dressing perhaps more completely than any other surgeon in the city, and his results are, as a rule, excellent.

He showed me a case, in the same ward, of an incised wound of the tongue, from which the hemorrhage had been obstinate. To control it, he first ligated the lingual artery and subsequently the external carotid. Even then there was some hemorrhage, and a ligature had to be thrown around the tongue before it entirely stopped. A. B. T.

June 11, 1883.

CHICAGO.

ON the first of the month the Illinois Training-School for Nurses celebrated a double event,—the graduation of its first class, and the opening of the new home in connection with the school. The school was established nearly two years ago, and is now considered a success. The graduates numbered six, and there are twenty-seven under instruction. Those admitted to the school are required to place themselves under one month's probation: if at the end of that time they are considered suitable persons, they are admitted to a regular course of instruction covering two years. The new home is a substantial four-story-and-basement brick building, affording accommodation for about fifty nurses. The building was erected by public subscription, and has been paid for so far as it has gone. The intention is to increase its size by additions which have been kept in view in the plans. The examining board on the occasion of this commencement was composed of regular and homœopathic physicians.

There is renewed agitation over the disposition of our unclaimed dead, and a very shocking state of affairs has been shown to

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exist. The county undertaker is charged with collecting pay from the county for the burial of bodies which he had shipped to various points for dissection, some going to Keokuk, Iowa, Ann Arbor, Mich., and St. Paul, Minn. From these markets the undertaker is said to have received as high as fifty dollars for a subject, while our local schools were left short of material. The grand jury has indicted the undertaker, but that worthy is now sojourning in Bermuda for his health: his offence is punishable with one thousand dollars fine or one year's imprisonment.

Our State Board of Health has been in receipt of the usual amount of interesting correspondence, the last being a postal card from the indignant "President" of the St. Louis Eclectic Medical College, in which he styles the Board "dastard bigots and villains" because that body declined to recognize certain of its graduates. The Board is about to give its attention to an eclectic of this city who has lately published and distributed a curious pamphlet full of crazy assertions and abuse against the Board and the practice of vaccination. The document is one likely to work harm among the ignorant.

The delegates from this city to the American Medical Association will number more than for several years past.

The health of Chicago during the past month has been exceptionally good.

June 5, 1883.

PROCEEDINGS OF SOCIETIES.

NEW JERSEY STATE MEDICAL SOCIETY.

THE one-hundred-and-seventeenth annual meeting of the Medical Society of New Jersey—the oldest chartered medical society in this country—was held at Atlantic City, June 12 and 13. By the courtesy of the West Jersey Railroad Company, a special train left Camden at noon on Tuesday, June 12, with over two hundred delegates and guests from Camden, Philadelphia, and the neighborhood. The sessions were held at Congress Hall. John W. Snowden, M.D., of Waterford, New Jersey, President of the Society, occupied the chair. An unusually large gathering of members and visitors was noticed, the weather being most favorable for attendance.

The State Medical Society met here last in 1875. Since that period Atlantic City has doubled in population, and more than trebled in importance as a sanitary and summer resort, according to Dr. Boardman Reed, who in his address of welcome gives the following interesting facts with regard to this valued health-resort:

"Among the recent improvements in the place are two new railroads from Philadelphia, gas-works, electric lights, a permanent ocean pier, a large number of new hotels, boarding-houses, and cottages, including some of rare architectural beauty, and, more important than all else, very complete, if rather expensive, water-works, insuring an inexhaustible supply of pure water at all seasons from springs upon the mainland. A Board of Health, with ample powers and the determination to exert them to the fullest extent necessary, has been organized under the recent sanitary laws. I crave your indulgence for a passing allusion to the work this Board has done and is doing. A competent medical gentleman has been appointed health inspector, and is devoting his whole time to the highly-important practical work of making house-to-house inspections and investigating alleged nuisances. All garbage is gathered and removed daily from every house in tightly-covered barrels, and is conveyed miles away from the city. Vaults and cesspools are required to be cleaned much more frequently than formerly, and must be so maintained at all times as not to be offensive. Arrangements are now making to put in at an early day an improved system of sewerage. Two different drainage companies, with ample capital, have submitted for the approval of the Board detailed plans which contemplate the use of powerful pumping apparatus, small straight pipes, and some chemical process for converting the solid parts of the sewage into fertilizers, allowing only the purified liquid portion to be emptied into the surrounding waters. Whichever of these companies can afford the strongest guarantees that it will carry out such a plan efficiently and in good faith will probably be approved, and there will then be assured to Atlantic City the most perfect system of sewerage possessed by any city on the Atlantic coast."

An address of welcome was also delivered by Hon. Charles Maxwell, Mayor of Atlantic City.

Dr. H. G. Taylor, of Camden, the chairman of the Committee of Arrangements, presented the programme for the sessions, and invited the Society to attend a banquet and reception given in its honor by the physicians, citizens, and residents of Atlantic City, on Tuesday evening. An excursion for Wednesday was announced to South Atlantic, to view the curious construction of a building the shape of an elephant. A yacht-excursion, a visit to the light-house tower, and a review and exhibition drill by the Government Life-Saving Service were also announced.

The report of Dr. A. B. Watson, chairman of the delegation to the American Medical Association, was received, and the reference to the course pursued by the Judicial Council to prevent the agitation of the Code question, and the announcement of the election of Dr. Austin Flint, of New York, to the chief office, excited much applause. The report was ordered for publication.

The Standing Committee, Dr. C. J. Kipp,

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chairman, read the report from the various counties with regard to prevailing and epidemic diseases during the past year. Malarial fevers, smallpox, and bowel-disorders had existed to a less extent than before, but pneumonia, catarrhal affections, diphtheria, scarlatina, and measles were, in some of the different sections, slightly more prevalent than usual. Clinical notes of several cases by individuals accompanied the report and were read by title. Literary publications were also announced by members of this Society.

The Society for the Relief of Widows and Orphans of Medical Men in New Jersey, having been organized about one year ago, is now in operation in Newark.

Dr. J. D. Osborne, of Newark, President of the Widows' and Orphans' Aid Society, made a vigorous and earnest appeal in behalf of this young but deserving benevolent Association.

A list of deaths during the year was read by the Secretary. The report was adopted and ordered to be printed.

Dr. Hunt, of Metuchen, offered the following resolution, which led to some discussion:

"*Whereas*, The American Medical Association has at its late meeting made new requisition of delegates before their names were allowed to be enrolled:

"*Resolved*, That in nominating delegates to that body the Nominating Committee be requested to confer with our Committee on Ethics, and, if they think necessary, with this Society, as to the propriety of this course, and what action needs to be taken in reference thereto."

After considerable discussion, and an explanation by Dr. William B. Atkinson, Permanent Secretary of the American Medical Association, that this was not a new requirement but merely a revival of one formerly in force by which every delegate was obliged to subscribe to the Constitution, By-Laws, and Code of Ethics of the Association, the motion of Dr. Hunt was lost by a decisive vote, after a motion to lay on the table had been voted down.

At the evening session at 7.30 o'clock Dr. John W. Snowden delivered his annual address on "*The Advances made in Medicine by Physical Diagnosis*." Beginning with that early stage in the history of medicine when physical diagnosis was unknown, he traced its use and development down to the present day. Hippocrates was the first to make use of it, and styled it "succussion." The doctor referred first to the means of diagnosis of diseases of the chest,—percussion. The discovery of thoracic percussion, he said, is due to Avenbrugger, whose labors in behalf of his discovery were not fully recognized even at the time of his death. It was neglected by the physicians of that time,—set aside as unworthy of consideration.

It is to Piorry and Skoda, however, that the most important advances in the practice of percussion are due. Before them percussion was practised with the fingers only, and it was for Piorry to introduce the use of the pleximeter. The knowledge of some of the phenomena of auscultation dates from the time of Hippocrates. He was also undoubtedly acquainted with the friction-sound of pleurisy and many of the catarrhal sounds. The real discoverer of auscultation, however, is Laennec, who died in 1826. The first stethoscope which he used was a roll of paper which he happened to have in his hand, and three years' further study made him acquainted with all the fundamental facts of the science.

The different means of physical diagnosis in use were then discussed in turn,—the spirometer, the manometer, the use of the tuning-fork, the stethometer, the cyrtometer, and many others. He referred to the great help of the thermometer, and latterly of the electric light and the gastroscope, with which the physician of to-day can examine the interior of the stomach in any living subject, when only a few years ago an accidental wound in the abdomen furnished the only opportunity for an examination of this organ in man.

After the address had been read, a committee on "Where and of Whom Reliable Vaccine Virus may be Obtained," H. H. James, chairman, reported complete inability to furnish the desired information, and suggested that the supply of bovine virus should be under the control of the State government, in order to prevent vaccine virus being subject to commercial speculation.

After adjournment, a grand hop and banquet, given by the citizens of Atlantic City, were held at Congress Hall.

On Wednesday morning the meeting was called to order at 9.30 o'clock. The committee on the Treasurer's accounts made a provisional report, and, on motion, it was directed that the Treasurer be required to give a bond of $5000.

The committee appointed to examine into the qualifications of an applicant for the degree of Doctor in Medicine, in accordance with the By-Laws, recommended Mr. P. N. Jacobus for the degree, which was conferred by motion of the Society.

The following names were proposed for honorary membership, Drs. Thomas Addis Emmet and Isaac E. Taylor, of New York, and unanimously elected.

The Committee on Prize Essay reported that no essay had been submitted for the prize.

Dr. Hunt offered a series of resolutions calling the attention of Congress to the needs of the Army Museum and Library of the Surgeon-General's Office at Washington, both for its support and preservation, requiring an annual appropriation and a fire-proof building, and petitioning the national Legislature to supply these needs. This motion was unanimously adopted.

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Dr. Joseph Parrish read a paper on "*Some Problems in Insanity.*" He said that in all large asylums there is a large class of harmless insane, known as chronic incurables, who are considered beyond the resources of medicine. He insisted that no line can be drawn between the acute and chronic, nor can the curable and incurable be thus differentiated. He cited an instance of a lady at 70 years of age, who was able to return to her home cured, and able to take care of herself, after twenty-eight years of insanity. Very many so-called chronic cases are curable, if we know how to go about it. He urged the appointment of a lunacy commission, clothed with sufficient authority to examine every place where an insane patient may be confined. He called attention to the disgraceful treatment of such patients in county poor-houses and similar places, and asked for the removal of the harmless ones for treatment on trial. If this should be done, there are enough accommodations in the existing hospitals for the insane in this State to accommodate all the violent cases and those requiring confinement, as well as cells for the criminal insane. He directed public attention to the condition of the insane in the various poor-houses, and called for enlightened legislation upon the subject.

Dr. Parrish offered a resolution, that a committee of the State Society be appointed, with authority to confer with sub-committees of the various county societies, to report at the next meeting upon the treatment of the insane in this State, and to recommend any steps that may be advisable in the premises.

Dr. Hunt offered the following substitute:

"*Whereas*, The condition of the insane poor in the several county poor-houses in this State is such as to warrant the earnest attention of this Society: therefore, it is

"*Resolved*, That the Chair appoint a Committee on Lunacy, whose duty it shall be to inquire into the condition of the insane poor in the asylums and almshouses of the State, and report at the next session of the Society."

This was accepted and adopted.

The President appointed Drs. Parrish, Gauntt, Pierson, Oakey, and Marsh to serve.

The Nominating Committee brought in the following report:

President, Stephen Wickes.
First Vice-President, P. C. Barker.
Second Vice-President, Joseph Parrish.
Third Vice-President, C. J. Kipp.
Corresponding Secretary, William Elmer, Jr.
Recording Secretary, William Parrish.
Treasurer, W. W. L. Phillips.
Standing Committee, Samuel S. Clarke, E. J. Marsh, J. T. Smith.

Next place of meeting, Cape May; time, June, 1884.

Dr. George Bayles read an essay on Causes of Melancholia. C. J. Kipp read a voluntary communication on the Management of Cases of Iritis. Dr. E. Mann, of Brooklyn, by invitation, read a paper on the Pathology of Inebriety.

The report of the Nominating Committee was taken up, and the officers unanimously elected by ballot.

The session adjourned at noon, after passing a vote of thanks to the citizens of Atlantic City, the authorities at the Life-Saving Station, and the railroads, for courtesies extended to and enjoyed by the Society.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

A CONVERSATIONAL meeting of the Society was held at the hall of the Society on Wednesday evening, March 28, 1883. Dr. Philip Leidy read a paper entitled "Medical and Vital Statistics: are they Reliable?" (see page 647).

DISCUSSION ON MEDICAL STATISTICS.

The President stated that discussion of the following points was especially invited:

The Registration Act, — its importance from a medical and legal point of view.

Carelessness in the matter of diagnosis by physicians, as evidenced by death-certificates and reports of contagious and infectious diseases: how such errors affect vital statistics.

What has been the experience of the members of the Society regarding the prevalence of diphtheria during the past fall and winter?

Dr. J. G. Richardson said he was very glad that the paper had been presented, both on account of its intrinsic importance and because it offered an opportunity to refer to the difficulty which the Board of Health has in supplying the vital statistics. Great efforts are made by the Board in this respect, but without the complete success which is so desirable. Dr. Billings has enunciated the dictum that if the reported death-rate of a large city falls below nineteen per thousand, an error exists somewhere in the statistics; either the deaths are not all reported, or the population is overrated. Several years ago, the death-rate of Philadelphia was, on one occasion, stated to be as low as seventeen and a fraction per thousand; and, although it is true that Philadelphia is a city of homes and of *healthy homes*, this low death-rate was probably slightly erroneous. Furthermore, it is to be observed that errors in diagnosis are frequent causes of defective statistics. In a certain county of a Western State sixty-nine deaths were returned to the health authorities, and sixty-four were actually reported to have been caused by "*sickness.*" Of course such a flagrant neglect did not exist in our own city, but even here room for improvement in this respect might easily be discovered.

Dr. William T. Taylor referred to the question of the prevalence of diphtheria, which had been alluded to in the paper. During

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the past three months he had seen many cases of sore throat, but had seen but five cases of diphtheria. Many cases of sore throat are, however, put down as diphtheria, especially by homœopaths. He recalled the fact that Dr. Wilson Jewell told him that during the cholera epidemic in 1854, many cases of simple diarrhœa had been reported as cholera by homœopathic physicians, because they claimed that these cases would have developed into cholera if it had not been for the homœopathic treatment.

Dr. S. Ashhurst said he had long since come to the conclusion that it was true that nothing could lie worse than figures,—except facts. The registration of deaths is important for legal reasons, and for the advantage of preventive medicine; but as indications of the relative prevalence of various diseases they are untrustworthy, except where very large numbers are considered. In the country medical men are so varied in their knowledge that no uniformity in diagnosis can be expected, and for some medical purposes, as where accuracy of comparative diagnosis is wanted, the death-statistics are worthless and will probably always remain so. As an illustration of the difficulties in regard to these matters, we may take the statistics of surgical operations. Esmarch, for instance, presented statistics which seemed to show that the antiseptic method is the *ultima Thule* of surgery, but other observers had not been able to get such uniformly favorable results.

In Philadelphia, the deaths were probably correctly reported. He was not aware that the death-rate of Philadelphia had ever fallen as low as seventeen per thousand, but if the reports indicated this rate they were probably correct, Dr. Billings's dictum to the contrary notwithstanding, as the registration of deaths and the estimation of the population in this city are pretty correct. It is the registration of births that is erroneous.

Dr. James C. Wilson referred to a paper recently published by Dr. Billings in the *American Journal of the Medical Sciences*, on the subject of vital statistics. Dr. Billings pointed out that no remedy for the present errors in these matters exists short of educating the public up to the standard of appreciating the value of correct statistics. The errors are partly from design, partly from neglect, because the community does not comprehend the importance of the results. Physicians, also, are often at fault. The education of the public must come through the instrumentality of the medical profession. Dr. Wilson does not agree with Dr. Ashhurst in regard to the absence of medical value of vital statistics. They, even when imperfectly kept, serve to indicate the approach of epidemic diseases, and, due allowances being made for their well-known faults, are not without value in forming estimates of the relation of particular diseases to local sanitary conditions. The Board of Health in this city is not systematic in its work: strictly, the law requires that a return shall be made of all contagious diseases, but in practice the Board expects merely returns of cases of certain forms of disease, such as variola and typhus fever.

Dr. Welch called attention to the fact that an Act of Assembly required reports of *all* contagious diseases except measles. Typhoid fever was not included in the list of contagious diseases within the meaning of this law.

Dr. C. H. Thomas agreed with the views advanced in the paper. The fault was both in the incomplete collection of the statistics and in the erroneous diagnosis of the causes of death. The difficulty of diagnosis had been forcibly brought to his mind by a series of three cases which had resembled diphtheria closely in some respects. The clinical histories presented the symptom of marked patches of white exudation, involving the faucial region,—tonsils, uvula, and pharynx,—but associated with this was very slight fever or other constitutional disturbance. The three cases occurred in three separate houses, were all in adults, and but a single case appeared in each house, notwithstanding that children resided in all. He could not conclude that the disease was diphtheria, and Dr. Bruen, who saw one of the cases with him, expressed the same doubts. They all yielded to expectant treatment in a very few days. In such a disease as diphtheria, concerning which the diagnosis is often uncertain, it seems practically impossible to obtain accurate statistics of its prevalence or mortality.

Dr. Eskridge referred to two cases which he had seen during the past winter, occurring in the same family, in persons sleeping, when he first saw them, in the same bed; one, a girl, aged 17 years, had a severe and fatal attack, the other, two years younger, had diphtheria in its mildest form and recovered without an untoward symptom. From his experience with the disease, he was beginning to believe in the non-specificity of the poison of diphtheria. He had seen cases of apparently simple tonsillitis pass into true diphtheria, and he had seen some children suffer from the disease while others of the same family were affected with a non-membranous pharyngitis.

THE TEA-PLANT IN EUROPE. — *L'Union Médicale* states that the attempts at acclimation of the tea-tree in the Loire-Inférieure are getting on very well. Grafts on camellias have borne very well in the open air at a temperature below freezing. In Sicily, near Messina, one hundred and twenty plants, planted three years ago, are very vigorous, and have produced abundance of leaves and seeds. It remains to be seen whether the aroma of the leaf will be preserved.

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REVIEWS AND BOOK NOTICES.

BRAIN-REST. By J. LEONARD CORNING, M.D., etc. New York, G. P. Putnam's Sons, 1883.

If we believe the alarmist, the specialist in nervous disease, the intelligent foreigner who writes us up in a few weeks of travel, our ancestors were but a sleepy people compared with ourselves. To draw general inferences, we should conclude that in Revolutionary days affairs moved very slowly. The uneasy patriots who objected to the impost on tea objected perhaps so strongly only because so dependent on the fragrant herb to rouse them from the lethargy which was universal. As the natives of Boston were the originators of the rebellion, we can see how, even as far back as that, they had some longings for mental activity. The "early to bed" of our childhood was but a traditional maxim derived from the days when Nature forbade late hours. Certainly, if since we became a nation our hurry has so increased, our power of sleep so diminished, further progress in the same direction would soon banish sleep altogether; it would become but a tradition.

But to stay this disastrous yet surely approaching time, when day will yield only to a more brilliant electrical illumination, night be abrogated, and toil be unremitting,—when the land will be filled with rest-cures and the pharmacies sell only stimulating cordials,—is the self-appointed task of the author of "Brain-Rest."

We do not wholly accept the popular theory of the cause of American nervous disease, or believe that our intensity is so much greater, our competition so much closer, than in older lands. There is something, indeed, in method, if we would do work and still save strength; and the American mind is not methodical: rather than plod, it would assail the goal by a leap. But the world's work is well done elsewhere. There is the struggle for a livelihood, the keen competition for pre-eminence, in other lands than ours. We must look back of all this, to climatic causes, to the transplantation of the Caucasian to new fields and skies, to the signs, by no means wanting, that we are not yet acclimated in America as a race, and that it yet remains to be seen whether we will be. If in our efforts we are struggling not only against the usual odds of life, overcrowding, the desire to be early rich or famous, the numberless obstacles which life everywhere puts before men, but also against an ever-present but intangible foe pervading our cities and our country, coming in the desperate languor of our summer heats and the chilling blasts of our winters, depressing now, anon elevating and exciting, till constitution succumbs to the rapid alternation,—if there be further added the so-called "malarial poison" of new lands, and the defective hygiene of new cities, then we may have a total, struggling against which even the Caucasian constitution may more than meet its match.

The author of "Brain-Rest," trying to discover the remedy for all this, begins with the study of sleep, evidently the best starting-point for investigation, since so-called nervous exhaustion and brain-tire show themselves prominently first in insomnia. Indeed, the question of sleep is the key to the patient's condition. Given excessive work, irritability, depression, easy exhaustion, diurnal drowsiness, just as the patient approximates still to normal sleep at night, so will be the chances of his speedy cure.

Now, sleep, the author tells us, is now proved, by the investigations of Durham, Hammond, Fleming, and himself, to be due to brain-anæmia, initiated by normal intraganglionic exhaustion. There is, "under normal circumstances," "an ebb and flow of brain-activity" in "synchronous harmony with the setting and rising of the sun." For the most of his proof he relies upon the investigations of Dr. William G. Hammond, from whose works a lengthy quotation is always readily forthcoming, and, to distinguish him from the other investigators, he is careful almost invariably to term him "the eminent observer."

Now, it will not do for an individual to sleep for a given length of time in every twenty-four hours, for his "periods of rest should invariably occur at the time indicated by nature,"—viz., "as soon after sunset as possible." Here we strike the first clue to our present national condition,—artificial light, night-work, the exigencies of modern life. The author's panacea is as follows: To sleep, all worry and vexatious circumstances must be habitually avoided, and excluded from the mind for a considerable time before the hour for retiring; it will not do to count one hundred backwards, for this requires effort. One must "exclude each and every species of mental exertion;" and then "never thwart the drowsy impulse." The position on the right side is generally best. The evening meal should have been light and digestible, and tea and coffee, while not entirely condemned, are not to be taken at night.

The author seems to consider insomnia as the cause of all the evils that follow in its wake. "These"—irritability, melancholy, brain-exhaustion, hypochondria, and insanity —"can almost always be traced to some primary disorder of the function of sleep." But insomnia is by no means the first in the series of causes, but indicates that a stage has been reached after which the downward progress is much more rapid. For to the man who can still sleep well all things are yet possible: hence the importance of restoring sleep.

Now, for the relief of this condition of insomnia, apart from moral and mental means,

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the author offers mainly chloral, the bromides, and mechanical appliances. "The irritated brain-substance itself must be restored to a normal condition," by certain remedies which act on it, and by certain agents which act on the whole constitution. Here, of course, the diagnosis of anæmia from hyperæmia becomes of the first importance; and yet, after two chapters devoted to the calorimeter, Becquerel's disks, and cerebral thermometers, he says, "These beautiful appliances, owing to their cost, are not obtainable by all:" so that the diagnosis is thrown by pecuniary considerations into the hands of the happy possessors of "these beautiful appliances," and he gives us but little hope of arriving at correct conclusions without them.

In showing the methods of diminishing the cerebral circulation, the author states that medical men have always had, and always will have, doubts as to the propriety of ligating the carotids in purely functional cerebral disorders; therefore he has devoted considerable time to devising a perfectly safe method of reducing the blood-flow to the brain. This instrument he terms a "carotid truss," though a truss is something to support or retain, and the "carotid truss" is obviously for a different purpose. It has both a coarse and a fine adjustment, but is difficult to apply to the necks of fleshy persons; and these fleshy persons, as the author derisively calls them, do not bear pressure well. Yet surely they may need it even more than others, since they are generally ruddy, with congestive—in fact, hyperæmic—complexions and probably brains. It is sad to find that at the very outset Nature has, as it were, refused to give her sanction to the "carotid truss."

With this instrument, and a high-backed chair, like a dentist's,—and how happy would the world be if in that chair it could always be employed!—the author is prepared to give sittings, or sleepings, for regulated periods. "With proper tact and dexterity" it is easy to induce patients to wear the instrument for considerable periods; perhaps, with the absence of these qualities, they might wear it longer,—in fact, till the arrival of that official whom civilized communities intrust with the investigation of cases of mysterious taking off.

"Swallowing and conversation are to be avoided." No matter how angry the patient may be, he cannot even swallow his indignation.

But, to apply a higher degree of pressure for a short time, an instrument has been devised by the same inventor with a detachable key, working an Archimedean screw. Now, it would seem that an almost boundless field of usefulness might lie before this machine: its effects are happy, and a delightful confusion, rapidly followed by sleep, will be witnessed,—if used with "tact and dexterity." Sleep has indeed been aptly termed "the brother of Death." A few more turns of the screw, and the mother-in-law whose insomnia has been so troublesome will sink to rest. The pressure may not be extreme: "it should not [p. 78] be so great as actually to cause occlusion of the veins and arteries and complete interruption of the circulation:" this is not necessary; *the key may be lost!* "These are the most practical points."

In the use of internal remedies,—for he has not yet advised his truss in that way,—we have an excellent discussion of the use of the bromides and chloral. A good point is made (p. 83) when we read, "The proper time to treat sleeplessness is during the day." He administers his bromides before breakfast, before dinner, and at retiring, in progressively increasing doses. Of chloral he says that its chief virtue is that by it we can give to the already tranquillized brain the primary impulse to drowsiness,—meaning, probably, the final impulse: so that it should be given shortly before retiring. It may not produce a brain-anæmia,—secondarily it does, he believes,—but "it soothes the cerebral plasma itself." When cerebral anæmia is excessive, alcohol is the remedy; and there are times when opium, hyoscyamus baths, and electricity are especially useful.

This book certainly suggests a hope, when all fails and the American has become a sleepless being, that the "carotid truss" will enable us still to sleep, and, like Napoleon the Great, to sleep at will. The citizen of that day will take his sleep as he will his food and drink, and, on emergency, take a deeper slumber, with increased carotid pressure, if time be short. But surely he will need to protect himself by legal enactments, and surround the "carotid truss" with the safeguards of the law, lest, while he slumber, his business rival, his professional opponent, stealthily turn the key one turn too many, and exhibit those higher powers of the instrument which are now used by the inhabitants of Spain on condemned criminals and by the garroter in his midnght avocations. In fact, the mental effort required to submit one's self to the truss would, in most cases, set up such a permanent condition of hyperæmia as to render its constant use necessary. E. W. W.

A Treatise of Practical Instructions in the Medical and Surgical Uses of Electricity, etc. By S. E. Morrill, M.D. Kalamazoo, Michigan, Kalamazoo Publishing Company, 1882.

From aphthæ in the mouth to hemorrhoids elsewhere, from tic to sciatica, electricity in the hands of the author cures everything. Given a careful electrical diagnosis, and even the uneducated can work miracles. Acute diseases yield in from three to five sittings; chronic, in from ten to fifty. Some little assistance may be rendered by homœopathy; ipecac and nux are mentioned, and electricity

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the author proves to be a true homœopathic remedy. Triturations are termed dynamizations, and this is derived from a word meaning "force." Electricity is a force; therefore it is a homœopathic medicine. How grand, yet how simple, are the deductions of science! But it is more still: it is a food. This he modestly does not claim as an original discovery, but narrates the case of a child suffering from difficult dentition, and remarks, "when the current was wrapped in a wet cloth, she would chew it with her swollen gums;" it was solid food. By electrical diagnosis diseases are discovered as well as cured,—discovered, he says, much more certainly than by pathology as taught in the schools; and new diseases undreamed of by science are evidently brought to light, though again no claim for their discovery is set up. Dentition, one case of which was "treated all through," "vaginitis," "diphtheritic" croup, and "adhesions of the uterus to the vagina," yielded to the potent force. Girls of ten menstruate regularly, and children of fourteen months suffer from metritis. The author's language is sometimes obscure, and we have tried not to misunderstand it; but when we find him (or her) saying that he in certain cases "uses a catheter to the positive current," can it be possible that he has attempted to draw off electricity as he would urine, or that he has mistaken the cell of a battery for a distended bladder?

Hydrophobia, smallpox, and "toxicum," whatever that may be, present no difficulties to the electric fluid. In the cure of sciatica, "if the patient is a lady the current can with benefit be applied in the vagina;" and one great advantage in being "no gentleman" strikes us forcibly when we read page 176.

Insanity, the author tells us, is supposed by the innocent public to be "caused by mental disease;" but in the many cases of insanity cured by him he "did not in one instance find the cause in the brain." Consumption is the most difficult disease to diagnose, electrically or otherwise. The author has looked in the American Cyclopædia to see what it is, and frankly tells us so. "Oleaginous oils" he condemns, preferring probably the oil of vitriol, which is not "oleaginous." When he wishes to condemn anything extremely modern, as the stethoscope, the endoscope, the sphygmograph, he quotes Dr. Benjamin Rush, whom he evidently considers a living authority of great scientific weight; and, in short, it would be hard to find anything more hopelessly trashy than this book, outside the advertisements of Kidney-Wort and St. Jacob's Oil. E. W. W.

THE PRACTITIONER'S READY REFERENCE-BOOK. By R. J. DUNGLISON, M.D. Philadelphia, H. C. Lea's Sons, 1883.

The appearance of a third edition of this curious book, six years after the publication of the first output, shows that the sagacity of its author was not at fault in supposing that the half-education so common in this country would cause the demand for just such a treasury of disjointed practicalities as the present volume. This edition has been adapted to the new Pharmacopœia, and has been in various ways improved, so that its popularity will probably not wane. It is a pity, however, that in the matter of antidotes its author does not keep abreast of chemical science: thus, the mixture recommended as an antidote for morphia is an absurdity,—tannic acid added to an infusion of coffee. A man poisoned with carbolic acid might die, simply for the want of the proper antidote, if the practice of the book were followed. In acute poisoning with acetate of lead the patient might die whilst the prescription commended was being sent for, although soap and salt, equally good antidotes, were close at hand. The treatment of copper poisoning is hopelessly imbecile,—iron and flowers of sulphur in a case of sulphate of copper poisoning. The antidote given to creasote is in no sense antidotal to it. "Hoffmann's Anodyne" is said to be the antidote to sulphuretted hydrogen, Seidlitz powders to chloroform, ergot to carbonic oxide, pepsin to alcohol, and syrup of maidenhair fern to ergot! A more puerile, misleading, patient-destroying chapter we have never seen in a very wide acquaintance with medical literature in three languages. We advise every half-educated purchaser to cut this chapter out of his book, through fear that in the emergencies of a poisoning case he may be led by the pressure of his despair and ignorance to consult it.

A MANUAL OF GYNÆCOLOGY. By D. BERRY HART, M.D., F.R.C.P.E., etc., and A. H. BARBOUR, M.A., B.Sc., M.B., etc. New York, William Wood & Co., 1883. In two volumes.

THE DISEASES OF WOMEN: A MANUAL FOR PHYSICIANS AND STUDENTS. By HEINRICH FRITSCH, M.D. New York, William Wood & Co., 1883.

The wayfaring student of gynæcology, though a fool, need not err, one would imagine, unless confused by the multiplicity of guide-posts. The two works noted above view the subject from somewhat different stand-points. The manual of Dr. Hart and Mr. Barbour goes deeply into the anatomy, physiology, and pathology of the pelvis, and concerns itself with operative measures, while the manual of Dr. Fritsch is rather suited for those who have some faith left in the value of remedies and who would consider the knife the final resort. Dr. Hart's pages are overflowing with illustrations,—the two volumes contain eight plates, four hundred and eight wood-cuts, and one lithograph,—while the manual of Dr. Fritsch has one hundred and fifty-nine wood-engravings. As text-books, each serves its own purpose, and is excellent

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in its way,—the former being much more thoroughly scientific in its arrangement and minute in its details, while the latter is more readable and contains a wealth of therapeutic suggestion and advice. E. W. W.

GLEANINGS FROM EXCHANGES.

MICRO-ORGANISMS AND TUBERCULOSIS.—The April issue of *The Practitioner* is entirely devoted to a report to the "Association for the Advancement of Medicine by Research on the Relation of Micro-Organisms to Tuberculosis." The researches of Klebs, Toussaint, Schüller, Koch, and others are discussed historically and critically. The methods of Toussaint and Koch were made the subject of personal investigation, and visits to their laboratories at Toulouse and Berlin, with the results of a large number of physiological experiments, are likewise included in the report, which is further illustrated by some beautiful colored plates representing microscopic sections of diseased structures, and showing the grouping of the tubercle bacilli. Dr. Cheyne says, in conclusion,—

"A consideration of all the facts has led me to the conclusion that tuberculous processes in the lungs are due to the tubercle bacilli, and, so far as I know, to them only. By a tuberculous process I mean one where there is proliferation of epithelium, caseous degeneration of this proliferated epithelium, and inflammation round about, these changes being progressive. It has been supposed that inhalation of dust of various kinds may give rise to phthisis. That the inhalation of dust will lead to inflammatory changes is very likely, that it may lead to proliferation of epithelium which may subsequently degenerate is possible, but that the process will be progressive and extend beyond the seat of irritation is not probable. That the changes set up by the presence of gritty particles may, however, prepare the lung and render it a fit soil for the implantation of bacilli is very probable, and in this way a true tuberculous process may supervene, not due to the original gritty substances, but to the bacilli which came afterwards. I have only had the opportunity of examining three cases of potter's phthisis and one of miner's phthisis. In the former there was, histologically, a true tuberculous structure, and there the tubercle bacilli were found. In the case which was labelled miner's phthisis, but the details of which I did not obtain, there was fibrous formation, the fibrous tissue being very vascular, and there was no appearance, histologically, of tuberculous structure, nor were any bacilli present.

"As to the intestinal ulcerations which often occur in phthisis, and which are supposed to be due to swallowing sputum, I have only examined two cases, and there I found tubercle bacilli in the wall of the ulcer bearing the same relation to epithelioid cells and caseous matter as elsewhere.

"As to heredity of tubercle, I would call attention to the case of the guinea-pig, which was highly tuberculous and which had an almost fully developed fœtus in its uterus (Experiment XVIII., p. 289). The fœtus and placenta were healthy and free from tubercles.

"It has often been urged that the milk of tuberculous cows is infective. This may be the case when the mammary glands become tuberculous; and the mode in which the bacilli might get into the milk is well illustrated by the appearances which I found in the kidney of rabbit No. 1. (Experiment XIV., p. 286.) There not only were bacilli present in the tubercular mass, they were also found in large numbers in the epithelium of the kidney-tubules, and in the interior of the tubules, both in the immediate vicinity of the mass and at some distance from it. I have not yet had an opportunity of examining an early tubercle of the kidney, but, from what I have seen, I think it quite likely that the epithelium of the tubules may in some cases be the primary seat of the bacilli in the kidney, just as the alveolar epithelium is in the lung. In that case bacilli would be present in the urine not merely when there were marked tubercular masses in the kidney, but also where the disease was but slightly advanced, here again resembling the case of the lung. From analogy I suppose that the same is the case with the mammary glands, and that bacilli might be present in the milk even though the disease of the gland is not sufficiently far advanced to be noticeable."

CONGENITAL DERMOID CYST OF THE EYE.—A case illustrating this rare condition was communicated to the Société de Chirurgie by M. Brière, of Havre. An infant, 3 days old, exhibited an outgrowth from the left eye, which was malformed; only the inner third of the cornea and iris remained, the pupil was absent, and there was no external cul-de-sac of the conjunctiva, but it was replaced by a fleshy mass having the appearance of a pterygion. The walls of the cyst were formed by the elements of the skin, containing numerous hair-follicles, with their sebaceous glands and sweat-glands. The tumor was the size of a nut, and was connected with the eye with a pedicle which contained an artery, vein, and nerve-trunk.—*La France Médicale*, No. 49.

CHIAN TURPENTINE IN CASES OF UTERINE CARCINOMA.—Dr. Currie, having found that Chian turpentine gave unexpected relief from pain in a case of duodenal cancer, although its fatal termination was not prevented, decided upon using it, as recommended by Clay, of Manchester, in carcinoma uteri. In a case of this kind (reported in the *Edinburgh Med-*

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ical Journal, May), in a lady at the change of life, where the cervix was of almost cartilaginous hardness, he used it, as ordinarily advised, in the form of pill, with great amelioration of the symptoms, although the progress of the case and its fatal issue were unaffected. He suggests an ethereal solution to be used in place of the solid turpentine.

SPURIOUS BICHLORIDE OF METHYLENE.—M. Regnauld (*Le Progrès Médical*, xvii.) found that two French products sold for methylene were nothing but chloroform, and two other samples obtained at quite a high price from England were found to be only a mixture of chloroform and wood-spirit. Possibly some of the deaths from methylene bichloride might be explained in this way.

MISCELLANY.

KEFIR, OR GYPPO: A FERMENTED MILK.—E. Kern, of Moscow, contributes the following article to the *Medizinskoje Obosrenije*:

"Kefir," a drink made by the action of a peculiar ferment upon cow's milk, is the chief article of diet among the mountaineers in the neighborhood of Mount Elburus and Casbec. It is a thick, white fluid, with a flavor that recalls that of sour wine. The mountaineers call it "gyppo," while it is known to the Russians and Cabardins there under the names of Kefir, Kifir, and Kiafir. In addition to its nutritive value, it is thought to possess curative powers, especially in anæmia, scrofula, intestinal catarrh, and chronic catarrh of the lungs.

The preparation of Kefir is very simple. The mountaineers pour the milk into a bag made of goatskin, and then throw into it what they call the "seeds" or "kernels." These are about as large as English walnuts, quite consistent, and of a white color, but their origin is unknown. In a few hours after they are put in it begins to ferment. As caseine is frequently left in these bags and decomposes, it is preferable to use clean wooden or glass vessels to obtain a pure flavor.

There are three different strengths, as with koumis,—the weak or one-day kind, the medium or two-day sort, and the stronger, which has fermented for three or more days.

The chief secret in its manufacture consists in the peculiar substance that causes the fermentation. It is with the utmost difficulty that this can be obtained from the mountaineers. If a dry, dark-brown, and shrivelled piece is thrown into the milk, it very soon swells up, becomes smooth and milky white, and acquires the shape of a mulberry or cauliflower, and fermentation goes on rapidly. If a piece is broken off and put in another vessel of milk, it can be seen to grow perceptibly.

Kern deserves credit for having examined this substance. He found it to consist chiefly of a mass of *zoogloœ*, a kind of bacteria, which he named *Dispora Caucasica*. They consist of little rods 3.2 to 8.0 mm. long and 0.8 wide. There are also mixed with these some yeast-cells (*Saccharomyces cerevistæ*). This ferment will keep for months, when dried, without losing its activity. The author has tested this himself by experiments now being made in St. Petersburg.

Since an excellent substitute for koumis can easily be made anywhere with this ferment, it would seem to have an important future before it.

In conclusion, we would refer, for other details, to a paper by the same author, entitled "A New Milk Ferment from the Caucasus," published in the *Bulletin de la Société des Naturalistes de Moscou*, 1881.—*Druggists' Circular*.

PRIZES FOR SANITARY RESEARCH IN ENGLAND.—The old and distinguished Worshipful Grocers' Company, of London, England, has created a system of endowments for the encouragement of "original research in sanitary science." The research is to be relative to the causation of important diseases and means for their prevention. Of two classes of endowments, one is intended "as a maintenance for work in progress in fields of research to be chosen by the worker," and is provided in the form of three "research scholarships," each of two hundred and fifty pounds annually. The other endowment is appointed as a "discovery prize" of one thousand pounds, to be awarded each four years. The scholarships are limited to British subjects under thirty-five years of age, in the appointment to which preference will be given to candidates whose researches in hand are judged likely to increase the knowledge respecting the causation and prevention of one or more diseases. The "discovery prize" will be awarded to original investigators in any country, who shall in the coming four years make the most important additions to the knowledge of the subject to be announced this month. Treatises published in the English language on the subject during the time will be accepted as competition-treatises, if the author has become a candidate.

AN INTERNAL MITE IN FOWLS.—Prof. Thomas Taylor, microscopist of the Department of Agriculture, had occasion recently to dissect a sick chicken, and he found that all parts of the lung, the bronchiæ, and the linings of the thorax and abdominal cavities were covered more or less thickly with a mite. An examination we were requested to make showed it to be in all respects identical with *Cyloleichus sarcopleides*, Megnin. This parasite is known in Europe to inhabit the air-passages of gallinaceous birds, giving the transparent and membranous linings of these passages the appearance of gold-beater's skin speckled with flour. It is likewise found in

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the bronchial tubes and their divisions, and even in the bones with which the air-sacs communicate. Megnin believes that while the mite may be extremely numerous, so as to cause mucous irritation and induce asphyxia and congestion by obstruction of the bronchiæ, and that birds may thus die, yet it is incapable of causing, as Gerlach and Zundel believe, enteritis or inflammation of the peritoneum.

CURIOUS RESULT OF CANNIBALISM IN NEW CALEDONIA. REPORTED BY THE EDITOR, J. M. CREED, L.R.C.P., etc.—In 1848, a man named Sutton, who had been adopted into and was for some time living with the Shuarka tribe of natives in New Caledonia, offended them so seriously, by first leaving it, and afterwards firing on the messengers who were sent to ask him to return, that, watching their opportunity, they attacked his camp, situated on an island a short distance outside the territory of the Shuarka chief, killed him, carried off his body and afterwards cooked and ate it, as was the custom of the New Caledonians. To the knowledge of my informant, Sutton had been for some time suffering from venereal disease, and the natives told him that every man who ate of the flesh died shortly afterwards, apparently poisoned.—*Australasian Medical Gazette*, April, 1883.

PROF. WINIWACTER, of Liège, has been employing parenchymatous injections of hyperosmic acid in cases of sarcoma and lymphoma with astonishing success (*Revue Médicale*). A man applied at his clinic with a sarcoma of the neck as large as a child's head, deemed inoperable. For a fortnight he made daily an injection into its substance of three drops of a one-per-cent. solution of the acid. The tumor rapidly softened, serous pus was discharged from the points where the injections had been made, the infiltration rapidly diminished, and at the end of a month the tumor had completely disappeared. There had been no sign of inflammation, and none of constitutional affection. Since this case he has resorted to it in others like it, as well as in cases of lymphoma and scrofulous adenoma. Only in genuine carcinoma has its result been disappointing.—*Weekly Medical Review*.

MUSTARD-AND-MOLASSES CATAPLASM.—Dr. Tyson, of Philadelphia, says that the addition of molasses to mustard, in making a sinapism, furnishes a mild, persistent counter-irritant which can be worn for hours.

New Remedies says this reads very much like a formula it published some years ago, in which the white of an egg was recommended as a vehicle for mustard plaster,—the advantage alleged for it being that it could be applied for several hours and would not vesicate. Not long afterwards, however, the editor had a letter from some one who, to his sorrow, had acted on his suggestion, and was then hunting for the rascal who proposed it. —*The Druggist*.

THE following analysis of Indian tea is from samples of 317 packages sold at auction in New York, May 17, 1883: Extract, 37.80 per cent.; total ash, 6.24 per cent.; ash soluble in water, 4.28 per cent.; ash insoluble in water, 1.96 per cent.; ash insoluble in acid, 0.16 per cent.; insoluble leaf, 47.12 per cent.; facing and coloring-matter, foreign leaves, exhausted leaves, none.

Prof. George H. Rohé, Professor of Dermatology and Hygiene in the College of Physicians and Surgeons of Baltimore, has been engaged by the Minnesota College Hospital for a course of twelve lectures upon hygiene.

MEDICAL NIGHT-SERVICE IN PARIS.—During the first three months of this year, 1865 calls were answered by the physicians of the Night Medical Service in Paris, or an average of nearly twenty-one patients each night.

CHANCROID TREATED BY RESORCINE.—According to Leblond et Fissiaux, resorcine, dissolved in twice its weight of water, offers an inodorous and efficient substitute for iodoform in the treatment of venereal ulcers.

THE Massachusetts State Medical Society has again refused to admit women to membership, by a decisive vote, at a meeting held June 13.

THREE factories in the United States consume nearly two million eggs a year in making the peculiar kind of paper used by photographers known as albumen paper.

THE Pennsylvania Anatomy Act has been signed by the Governor, and is now a law.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY FROM MAY 26 TO JUNE 9, 1883.

ALEXANDER, CHARLES T., MAJOR AND SURGEON.—So much of Paragraph 6, S. O. 82, A. G. O., April 15, 1883, amended to direct that he be relieved from duty at the United States Military Academy, West Point, New York, October 1, 1883. Paragraph 7, S. O. 125, A. G. O., June 1, 1883.

HEGER, A., MAJOR AND SURGEON.—Assigned to temporary duty in charge of the office of Medical Director Department of the South during absence on sick-leave of Medical Director. Paragraph 9, S. O. 55, Department of Texas, May 24, 1883.

MCKEE, J. C., MAJOR AND SURGEON.—Assigned to duty as Post-Surgeon Presidio of San Francisco, California. Paragraph 2, S. O. 56, Department of California, May 25, 1883.

BROWN, PAUL R., CAPTAIN AND ASSISTANT-SURGEON.—The extension of leave of absence on surgeon's certificate of disability, granted November 23, 1882, further extended six months on account of sickness. Paragraph 6, S. O. 123, A. G. O., May 29, 1883.

DE LOFFRE, A. A., CAPTAIN AND ASSISTANT-SURGEON.—To proceed to Madison Barracks, New York, and report to the post commander for duty. Paragraph 2, S. O. 98, Department of the East, June 5, 1883.

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PHILADELPHIA, JUNE 30, 1883.

ORIGINAL COMMUNICATIONS.

ADHERENT AND CONTRACTED PREPUCE, COMMONLY CALLED CONGENITAL PHIMOSIS.

Read before the Philadelphia County Medical Society, April 11, 1883,

BY DE FOREST WILLARD, M.D.,

Lecturer on Orthopædic Surgery in the University of Pennsylvania, and Surgeon to the Presbyterian Hospital.

FROM personal inspection of several hundred male genital organs in young children I am convinced that the condition known as adherent prepuce is a very frequent one in boys under the age of three years, and that it becomes gradually liberated during the succeeding years by the manipulations of the individual. The condition is caused by the cells of the rete Malpighii upon the under-surface of the fold failing to harden; hence remaining protoplasmic in their nature, agglutination is the result. This union, which is slight, may be due to the projection of the net-work of fibres beyond the cells, thus securing an interlacing and moderate degree of adhesion. Ranvier contends that the true protoplasm in all cells derived from the ectoderm is the clear substance in which they are embedded, rather than the threads themselves.*

While this adhesion continues there is always an appearance of elongation and contraction of the prepuce, denominated congenital phimosis, which has upon many occasions led to the sacrifice of this fold. My desire to-night is to demonstrate that this adhesion is a very common condition; that it should not be blamed for all the disorders attributed to its existence; that in the majority of cases it is remediable by simple measures; yet that its continuance may lead to extremely serious consequences, and that whenever resultant symptoms occur the glans should be uncovered by stripping or, rarely, by circumcision.

Unfortunately, I have not accurate records of all my cases, but I can now recall but few instances in children under thirty months of age where the foreskin was entirely free from the glans. As boys pass this period I have found that the line of adhesion recedes from the meatus little by little, until at five about one-half of the glans can be exposed; at seven there is still a rim of agglutination in front of the corona, and at ten the fold can be retracted without much trouble.

This is the rule; the exceptions are quite numerous, and it must be thoroughly understood that there are different degrees and forms of preputial variation, dependent upon the age of the patient, the amount of manipulation to which the penis has been subjected, and the degree of original abnormality. When small boys are associating freely with older ones they will not be long in discovering that it is a desirable thing to be able to disclose the glans, and they will suffer the slight pain of the daily gradual stripping of the head of the organ rather than be the subject of ridicule from their comrades. When the prepuce is simply adherent, and is not contracted, the lad will become his own surgeon and speedily effect a cure; but when stenosis exists he will have more difficulty, yet even here he is usually equal to the emergency, and by the age of ten has dilated the foreskin most thoroughly. The operation is hastened also by the very common practice with boys of closing the outlet of the foreskin and then filling the pouch with urine, which exercises a very powerful stretching influence. When true phimosis, however, exists, the surgeon should be the operator, as the boy's manipulations will tend to establish habits which may prove very injurious afterwards.

As I have found phimosis in children, the contraction is usually more apparent than real, and I have records of at least seventy-five cases in which at first sight it would seem impossible to retract the prepuce. Many cases will be met with in which the constriction will appear to be very tight, but after a moment's manipulation, during which the organ has become slightly erect, it will be found that patient pressure will cause the foreskin to glide backward and the meatus will be exposed. Perhaps not more than one line to the rear of the opening, and completely encircling the glans, will be seen the line of adhesion, and hardened smegma will be felt behind the corona. In these cases it has become the frequent habit to circumcise; but if the surgeon will simply grasp the organ with the forefingers and thumbs of both hands

* Comptes-Rend., xcv. 1374.

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he can without difficulty strip the prepuce backward, drawing first with one thumb and then with the other until in one minute of time, and with no more exercise of force than is required to remove the peel from an orange, the glans will lie uncovered, the retained smegma can be easily wiped away, and the foreskin freely drawn backward. The bleeding is usually scarcely more than the oozing of an abraded surface. If the contraction has been tight, it is well to return the prepuce at once, before turgidity of the glans occurs, after which oiled absorbent cotton can be thoroughly packed behind the corona with a probe. If there has been no stenosis, the cotton can be introduced before the prepuce is restored. In case of delay the swelling often becomes so great that a couple of probes may require to be inserted alongside the glans, or a hair-pin may be used as a track upon which to slide the foreskin to its place while the glans is compressed. For a few days the soreness and œdema will prevent retraction, but olive oil can be injected, or cosmoline upon cotton packed within the pouch; later daily retraction, with the use of oiled cotton, will prevent an adhesion of the two surfaces. Instruction should now be given that this portion of the boy's anatomy—*i.e.*, the rim behind the corona—should receive a daily ablution, and thus all readhesion and the accumulation of smegma will be prevented. I now circumcise about one-tenth as many patients as formerly, simply because, while I believe that the condition of adherent and contracted prepuce will if neglected produce serious results, yet I have found that nine-tenths of the cases presenting even contracted prepuces can be relieved by the simple manœuvre above described.

This method may not become popular with those who delight to make a great show of instruments, numerous assistants, anæsthetization, etc. (and to pocket large fees); but to the conscientious surgeon, who desires to accomplish the greatest amount of benefit to his patient with the infliction of the least amount of pain, this plan offers a most attractive opportunity; and it is especially of service where parents are very averse to an operation. In cases where the prepuce is still more contracted, a few moments' dilatation with the ordinary dressing-forceps will permit the manipulation described, and a few days of stretching will give a freely-movable prepuce. In cases of the next degree of contraction, forcible dilatation with phimosis forceps, or with a cervix uteri dilator, or a slight incision made through the mucous surface, will liberate the stenosis and expose the glans.

The use of a probe is sometimes necessary to tear up the adhesions.

When the contraction is extreme, the shortening and condensation of the inner layer great, or where the orifice is so small as to seriously interfere with the escape of urine, circumcision should be practised without hesitation, especially if the slightest symptoms of irritation are presenting themselves; but any one pursuing the method described will be surprised to find how seldom the operation becomes necessary, even when at first sight apparently demanded. In boys past the age of twelve, and in adults in whom congenital phimosis still exists with adhesion, more difficulty will be experienced in drawing the prepuce backward, and an operation is demanded in a much larger proportion of cases than would be requisite in the same apparent amount of narrowing in young children. The very existence of the condition at this age shows that the abnormality is great, and delay may cause atrophy of the glans. Park* reports twenty-five per cent. of boys in whom "retraction was out of the question." While I believe that "not one young boy in five can easily retract his prepuce," and if under five years of age not one boy in twenty, yet I am strongly inclined to believe from my experience that in a goodly percentage of the boys which he has described retraction could have been effected by a few moments' manipulation, or by simple dilatation with the dressing-forceps. If we secure an uncovered glans with a prepuce that can be easily drawn backward, I believe that, with cleanliness, we have a much more natural and healthful state of affairs than if the delicate mucous membrane of the head of the penis is exposed to irritating influences and the attendant evils enumerated below.

I am not yet convinced, from reading or from observation, that Hebrews are any more virtuous than Gentiles, or that they are less liable to syphilis, or that their unclothed glans are in any healthier condition than are those of individuals who are

* Chicago Med. Jour., December, 1880, xli. 565.

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willing to give their penis the same care that their hands and feet receive. Uncleanliness, in any part of the body, is productive of disease, and the penis is no exception to the rule. As to the theory that the uncovered glans can be more easily cleansed after a foul coitus, or reached in case of chancre, I cannot conceive that it is any part of the duty of a surgeon to prepare men for the leading of corrupt lives.

The observations of Otis,* Mastin,† and others show that the removal of the prepuce subjects the glans to an abnormal irritation, which ends in contraction of the meatus and hardening of the membrane from plastic exudation. Surely such a condition, in case of gonorrhœa, would counterbalance the danger of chancrous infection in a prepuce which could easily be drawn back for purposes of ablution. Mastin‡ has found this condition in nearly all Jews examined, and believes that it may become as much a source of genital irritation, with the results of urethral, vesical, and even general involvement, as is contracted prepuce itself. Seguin also states that Hebrews present evidences of marked reflex disturbances from genital origin with remarkable frequency; and Beard holds the same view.

I had prepared a series of histories of individual patients, but, as the details would extend this paper far beyond its desirable limit, I will rather venture to give you the impressions that these cases have made upon my own mind. The results of contracted prepuce are exceedingly varied, but we will first consider the influence upon the urinary organs themselves. First, we may mention *frequent priapism*. That the constrained position of the glans, and the retained smegma, should act as a disturbing influence, is most natural; and the results of undue excitation must, in time, have a decided effect upon the impressible nervous system of the child. Let me remark just here, in answer to a question which must arise in the minds of each one of you, if the glans is adherent in the majority of young children, why do not the majority of children present resultant symptoms? To this the only answer is that in this, as in every other condition, a certain number of individuals will possess counterbalancing or resistive powers, while others will be easily overcome. A hundred men subjected to the same harmful external influences will present almost as many varieties of result; even twin children, having the same extra- and intra-uterine surroundings, will fail to correspond, either in their mental, moral, or physical susceptibilities. Hence a majority of the children with adherent prepuces may escape all trouble and continue healthy, while the others will present various forms of irritation.§

The next result which I have commonly seen is *dysuria*,—a condition which may vary from that of a too frequent desire, up to the tenesmus and pain which will sometimes produce a convulsion. As I have met with these cases, the gravity of the symptoms has seemed to depend in great measure upon the amount of difficulty experienced in forcing the water through the narrowed orifice. When the back-pressure is great, as it is in pin-hole stenosis, the bladder soon becomes excessively irritable, and actual cystitis may result.

Frequently the patient will cry and strain until exhausted, while the reflex spasm will be so great that retention will often continue until hot baths and appropriate remedies have given relief. The spasmodic desire to urinate will sometimes awaken an infant from a sound sleep, and not even food will appease the violent screams. This condition is often mistaken for colic; but careful observation will show that relief comes after a discharge of urine, not of fæces or of flatus. In older children, the pain will render the patient restless and fretful at night, the distress often being so great that perspiration is profuse, and, if the spasmodic contractions are violent, even convulsions will result.

It is chiefly in these cases that I have seen true convulsions occur from this cause, and in a few severe attacks I was satisfied that the preputial condition was at fault, as no other reasonable explanation could be given, and the kidneys and other organs were not diseased.

Eustace Smith,‖ in a recent article on "Convulsions in Children," does not give this as one of the causes; but the relation

* New York Med. Rec., November 19, 1881, p. 578.
† Annals Anat. and Surg. Soc. Brooklyn, 1881, iii. 123.
‡ New York Med. Rec., November 19, 1881, p. 578.

§ Med. Rec., New York, 1882, xxii. p. 617. Propositions, Beard; also St. Louis Med. and Surg. Jour., April, 1882, p. 438; also Transac. Med. Assoc. Georgia, 1880, xxxi. p. 143, Richardson; also Quar. Transac. Lancaster City and County Med. Soc., 1881, ii. 65, Roland.
‖ London Lancet, Amer. ed., Oct. 1882, p. 266.

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between the two conditions has been made very practically apparent to me.

In many of these cases the symptoms are so closely allied to those of vesical calculus that a crucial test of exploration should always be instituted when stripping of the glans fails to relieve. But the symptoms will often be present when no uric acid concretions can be discovered. In nearly all these cases I have found the orifice so narrow that at first sight it seemed impossible to retract the fold; but I now rarely fail to slip it backward and detach it, with no instrument save the thumbs, or, possibly, a probe. Every operator acquires a dexterity of manipulation by constant practice, and he will, ultimately, strip many cases which he would at first have circumcised. Relief is speedy and permanent in nearly all cases where the bladder is not diseased.

Associated with dysuria I have frequently noted the relaxation of muscular power termed *nocturnal incontinence*, and so common have I found preputial narrowing with this condition, that I should as soon think of neglecting to examine the throat in diphtheria as to overlook the penis or vulva when this symptom is complained of in either boys or girls.

I have produced such immediate and permanent results in so many scores of cases by simply liberating the glans, or by separating and cleansing the labia, that I cannot attribute the beneficial results simply to the mental and moral effect of an operation so slight as stripping, especially as I have avoided medicinal aid. Not all cases, however, will recover speedily, and the surgeon should not promise too immediate results, since habits long established are hard to be overcome.

I have often been called, in consultation, to circumcise these children, but usually complete the cure without any mutilation. Should dilatation with the dressing-forceps, however, fail, I do not hesitate to amputate the fold.

The amount of smegma discovered behind the corona is often very great, but while it continues soft the more serious consequences of nervous disturbances do not seem to occur,—this latter train of symptoms appearing more frequently when the secretion from these glands is gritty or calcareous.

The children who suffer from nocturnal incontinence,* and especially those with dysuria, are usually irritable, cross, and peevish, fickle in their appetites, and capricious and nervous, owing to the general malnutrition which is a result.

In all cases of enuresis it is advisable to examine the urine, since diabetes or chronic nephritis may exist in addition to the physical condition noted. The outcries of this class of patients at night, and their failing health, will often cause the careful surgeon to search for spinal or joint troubles.

When circumcision is performed, it is well to make its moral effect as great as possible by magnifying it as a punishment for the incontinence, or for any habit of self-abuse which may have been contracted.

A few cases of *pavor nocturnus*, or *night terror*, have presented themselves to my notice. The child—usually from two to four years of age—starts from a deep sleep with a sharp cry, followed by expressions of fear or sorrow, trembling violently, or striking vigorously at a supposed enemy, even though the mother use every effort to convince him of her presence. The eyes are fixed and staring, and the child attempts to utter articulate sounds, but succeeds only in producing a series of ejaculations. Often without waking, but under the soothing influence of the mother's voice and hand, the little one again sleeps, to be disturbed in the course of an hour, or perhaps not until the following night.

These paroxysms may occur only after extra fatigue or some especial excitement during the evening, and various explanations have been given as to their cause. Indigestion, hysterical conditions, excited imaginations, may all assist in producing frightful dreams; but in the few cases which I have seen the patients were all sufferers from dysuria and nocturnal incontinence, and all had either closely-contracted prepuces or adherent labia, the removal of which conditions speedily cured the night-hallucinations.

As might be expected, *prolapsus ani* and *hemorrhoids*† are sometimes produced by the excessive straining of dysuria connected with preputial stenosis: the former I have met with on several occasions, the latter never, although I see no reason why it should not naturally occur.

A condition which I have observed very frequently, however, is the coexistence of

* Morris says one in twenty is affected. Med. and Surg. Rep., 1881, xliv. 652.

† Kelsey on Diseases of Rectum and Anus, p. 101.

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hernia, the explanation of which is easy, and has been noted by others.*

Balanitis in boys and vaginitis in girls are, of course, natural sequences, and disease of the kidneys would not be improbable.

Some go so far as to ascribe even *struma*† to genital irritation; and, while this condition does greatly interfere with healthful nutrition, yet it seems far more probable that the morbid tendency to languid forms of inflammation would have existed had the child been absolutely free from any genital abnormality from birth. Its feeble condition might very probably, however, render the presence of an adherent prepuce an additional factor in developing wasting disease.

Pott's disease, even, is attributed to this cause; and, while everything that lowers general vitality may assist in such destructive inflammation of the bodies of the vertebræ, yet I cannot conceive that the preputial was the primary cause. True, we shall find adherent prepuce in Pott's disease, as in typhoid fever, but it should not be looked upon as prime factor.

The coexistence of adhesion with *morbus coxarius* has also been frequently noted; but, save by lowering general vitality, I am not able to trace the relation of cause and effect. The relation may be the same as expressed in regard to cases of spinal caries,—merely one of several factors; although Barwin reports eighty-five per cent. of balanitis and adhesion in his coxalgic cases.

Dana‡ has seen cases in which medicines and hygiene had accomplished all claimed for circumcision, even where the prepuce was adherent.

Taylor§ believes that imperfect sexual hygiene has much to do with reflex irritations, and advises operative relief.

Beard‖ advises that the genital cause of irritation be taken with caution.

Seguin¶ gives excellent diagnostic points in relation to sclerosis.

The writings of Schweigger-Seidel** and of Bokai†† have brought the subject of genital irritation ably before their neighbors abroad, as have also the notes of Verneuil‡‡ and Picard;§§ but the majority of testimony has been collected upon this side of the water.

Epilepsy I have seen occasionally associated with this adhesion, but have not obtained much relief from uncovering the glans, and am inclined to believe that the true difficulty is central and not peripheral.

Gastralgia,‖‖ diabetes,¶¶ even diarrhœa, are all mentioned as results; but we must be careful to eliminate unreliable notes.

Uræmic*** poisoning has been noted, as have also a score of other difficulties.†††

Passing to the wider effects of *nervous phenomena*, I am sometimes inclined to feel that the existence of reflex symptoms is still debatable, and that we are too often inclined to refer choreic, incoördinate, and irregular muscular movements to genital irritation simply because an adherent or contracted prepuce is found to exist; but the more I study these cases of lack of coördination and eliminate every other reasonable causative influence, and the more I review the notes of my cases, the more satisfied I am that reflex movements do sometimes occur from this as a sole or most probable cause, and that the removal of this cause acts most promptly and permanently in effecting a cure.

On the other hand, I do not believe that we should infer at once that we have discovered the cause of a reflex paresis simply because the patient has an adherent prepuce.

So many children are subject to this condition that a careful examination must be instituted to discover whether a deeper and more central disease may not be found which is the chief factor in producing the nervous conditions noted. If sclerosis exist, or if central brain-power be wanting, removal of the prepuce cannot restore what has been destroyed, or produce what has never existed; yet even here the genital condition may act as an irritant to already weakened central ganglia, and the removal of even a minor exciting cause is desirable.

The operation of circumcision may now

* Osborn, Brit. Med. Jour., 1881, i. 427.
† St. Louis Med. and Surg. Jour., December, 1881, p. 628.
‡ New York Med. Rec., 1881, xx. p. 569.
§ Brooklyn Annals Anat. and Surg. Soc., 1881, July, p. 1.
‖ New York Med. Rec., 1879, xv. p. 73; also Transactions Amer. Med. Assoc.
¶ Arch. Scientif. and Prac. Med., February, 1873. Archiv. Med., February, 1879, New York.
** Jahrbuch für Kinderheilk., B. v. Heft i.
†† Virch. Arch., Bd. xxvii. Heft ii.
‡‡ Gaz. des Hôp., Paris, 1881, liv.
§§ Annal. de Gynécol., Paris, 1882, xvii. 364.
‖‖ St. Louis Alienist and Neurologist, 1881, ii. p. 648, Sanders.
¶¶ Transactions Amer. Med. Assoc., 1880.
*** New York Med. Rec., 1882, xx. 65, Hart.
††† Louisville Med. News, 1882, xiii pp. 25, 49; also Amer. Jour. Med. Sci., 1880, lxxix. p. 444, Simmons; also Atlanta Med. and Surg. Jour., Jordan, 1880–1, xviii. p. 513; also Mississippi Valley Med. Monthly, 1882, ii. p. 99, McGee; also Glasgow Med. Journal, Dunlap, 1882, vii. p. 288.

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be said to be fashionable; but as surgeons our duty is to consider the benefits to be obtained, and if we find that the operation fails to accomplish permanent good we should still consider it *sub judice*, and search for further reliable knowledge.

Hence we find men like Agnew saying that the majority of their circumcisions have not proved as successful as they had hoped; while Mitchell, Da Costa, Hammond, Jewell, and others have rarely, if ever, met with reflex paralysis which they could properly refer alone to constriction of the penis; yet we are all familiar with the various nervous symptoms which may occur from peripheral irritation reflected upon some other nerve-trunk, and which are no more difficult of explanation than are the convulsions of childhood from teething or from a full stomach. The presence of a minute foreign body pressing upon a nerve, neuromata, the existence of stone in the bladder, worms, and many other causes, could quickly be recalled to mind, and, if these will give irregular or incoördinate movements in muscles, it certainly does not seem strange that hardened masses of smegma from the follicles of Tyson,—perhaps gritty and calcareous in their composition, and closely confined within delicate, sensitive walls,—combined with constant traction upon, and irritation of, the glans, should give irregular muscular action.

Again, in girls and in women we find various reflex phenomena, mentioned by careful observers,* when disordered genital organs would certainly offer a more ready explanation of the cause than would the theory of sclerosis or neurasthenia. I have seen marked jerkings and twitchings of the legs, and even of the muscles of the face, in girls, relieved without medicine by the simple separation of adherent labia and strict attention to cleanliness. In one girl, of three years, irregular movements were marked, and were accompanied by a disposition to compress the labia and make friction upon them by moving the thighs. The child would sit with glistening eyes, flushed face, and excited air, indicating almost the existence of an orgasm; yet all passed away without medicine, after the genitals, reddened and inflamed, had been thoroughly cleansed and healed. The labia were adherent, but the clitoris was normal. I have never yet seen a case in which I considered Baker-Brown's operation of clitoridectomy justifiable.

Shaffer† and Gray‡ have both raised their voices in protest against this circumcision mania, but in their zeal to arrest the tide they have gone too far, and contend that reflex paralysis never occurs in children from genital irritation. I could go through my private and public notebooks and show them many cases of reflex paresis permanently relieved by stripping or by circumcision, but their number would be very small when compared with the cases in which adherent prepuce existed, or compared with the cases of deficient coördination, in which the same operations failed to relieve symptoms which had undoubtedly had a central origin, and in which the removal had been done simply to be rid of one possible factor.

Circumcision is not a cure-all. Its application is limited; but, in the cases requiring its performance, marked benefit will result, and we should not overlook its merits simply because it has been abused.

Certainly the loosely-reported cases of Sayre§ and others require that we should carefully examine the real advantages to be gained, and apply more closely every diagnostic test to discover the cases which are remediable and those which are not.

It is not conclusive evidence to say that such a train of symptoms existed, that the prepuce was adherent and that circumcision was performed. We must know whether other causes were present, and whether operation proved of service.

When there is lateral sclerosis, or when children are microcephalic, it will require much more than circumcision to give nerve-power where none exists. Sayre may visit idiot-asylums‖ and find scores of boys with adherent and apparently contracted prepuces, but if he will revisit them years afterwards he will find, as I have, only recently, that, though circumcised, they are cripples still, and would have

* Ohr, Amer. Jour. Obstet., January and February, 1883; Engelmann, Trans. Amer. Gynæcol. Soc., vol. ii.

† Brooklyn Annals Anat. and Surg. Soc., 1881, May, p. 243; also New York Med. Rec., 1882, xxi. pp. 193, 136, 65; see also Annals, February, 1882.

‡ New York Med Rec., November 19, 1881, p. 570; Annals Anat. and Surg. Soc., Brooklyn, 1882, v. pp. 27, 78.

§ Orthopædic Surgery; also Med. News and Abstract, June, 1880, p. 321; Phila. Med. Times, November 18, 1882, p. 123.

‖ New York Med. Rec., April 6, 1878.

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been the same even though they had been subjected to the Jewish rite on the eighth day.

Shaffer also says that sclerosis may not be evident until the child begins to walk, when its awkward gait is referred to genital irritation, simply because its prepuce is adherent. Now, if my observations in regard to the general prevalence of adherent prepuce be borne out by further researches, it is not strange that the child's penis is found in this condition, as it appears to be the almost normal condition in children just beginning to walk.

The long list of symptoms and of diseases which may follow this condition is being weekly enlarged by reports of cases from all quarters, and in the flood of material we must be very careful to note first whether the adherent prepuce is simply an accidental accompaniment of the disease, existing as it does even in large numbers of healthy children, or, second, whether it be the prime cause of the neurasthenic* or reflex symptoms, or whether it be simply a minor factor. Again, we must carefully distinguish between permanent improvement and the apparent change for the better which takes place after the shock and alterative effect of an operation, producing, as it does, a profound impression upon the infant mind.

So general has become this practice of circumcision that whenever a child is found with adherent prepuce this fold is at once removed, and no other cause of difficulty searched for. This I have already shown to be necessary only in a limited number of cases. Chapman† even says that "it is always good surgery to correct this deformity, whenever it is at all aggravated, as a precautionary measure, *even though no symptoms have as yet presented themselves* to indicate the early development of such troubles as I have been endeavoring to illustrate,"—namely, secondary complications. Acting upon his theory, we should slit up all canaliculi, lest stricture should sometimes result, or dissect out every tunica vaginalis testis, lest hydrocele might occur at some indefinite future period. Let our friend ask the next hundred men whom he meets whether they would prefer to retain their prepuces or to lose them, and I think that he will be convinced by their answers that they very much prefer the normal condition. Why should we mutilate a child unnecessarily, or perform an operation we would not dare to do upon his older brother?

The majority of the several hundred boys whom I examined had adherent prepuces, yet the majority of them were as healthy and hearty specimens of male humanity as one might desire to see. Now, as these boys are perfectly healthy, and as they will loosen their own prepuces in the natural way before they are ten years of age, why should we torture them with an operation as long as it is unnecessary and may be even harmful, as I have already shown? Is it not better repeatedly to call the attention of physicians to the early phenomena of dysuria, nocturnal incontinence, etc., which may accompany this condition, so that they may be prepared to recognize the incipient symptoms of genital irritation and at once strip the glans, or occasionally, if necessary, circumcise?

To sum up, then, I would say that if this paper shall cause any physician to investigate more closely the condition of the genital organs in all cases of urethral or vesical irritation, and in every instance of reflex nervous disturbances, or, on the other hand, if it shall cause any medical man to refrain from uncalled-for mutilation, it will not have been written in vain. My purpose has been threefold: first, to show that the condition is so common a one that it should not necessarily be held responsible for all nervous phenomena which may have arisen; secondly, that it is usually easily remediable; thirdly, and chiefly, that it may produce most serious consequences, and that in every case where the secondary symptoms enumerated are present or threatening, one very possible factor in the production of such phenomena should be removed, preferably by stripping the glans after gentle or forcible dilatation, or by circumcision whenever the milder measure fails to secure the normal standard,—*i.e.*, a prepuce freely movable over a healthy glans.

1818 Chestnut Street, Phila.

* New York Med. Rec., 1882, xxii. p. 617; also 1879, xv. p. 37; also Med. Bull., 1882, p. 248.
† Phila. Med. News, September 16, 1882, p. 314.

The American Association for the Advancement of Science will hold its thirty-second annual meeting at Minneapolis, Minn., August 15 and following days. Members expecting to attend the meeting are requested to notify the Local Secretary, Prof. N. H. Winchell, Minneapolis, as early as possible.

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VACCINATION.

Read before the Philadelphia County Medical Society, April 11, 1883,

BY LAURENCE TURNBULL, M.D.

THE successful operation of vaccination, when properly and skilfully performed, with pure vaccine matter, has been the means of saving millions of human beings. During the half-century preceding the discovery of vaccination by Jenner, one death out of every ten in Great Britain was occasioned by smallpox. Prior to the introduction of vaccination by Dr. Waterhouse in this country, whole tribes, villages, and even towns were completely decimated by the terrible epidemic.

Unfortunately, like every good gift which man has received, it has been altered, changed, or made of less avail by his cupidity. We suffer and have suffered from impure vaccine virus, as it is sometimes found associated with various impurities, such as blood, hair, dung, sand, and earth; while in many instances heat has entirely destroyed its active properties, so that when employed it affords no protection. Indeed, in some instances we have seen eruptions of various kinds produced by it, with inflamed glands, and diseased eyes and ears, —all arising from impure matter. From the use of some of this so-called "bovine virus," now being sold in this city, I have found that it produced a pseudo-vesicle, containing at first a little serum and blood, but soon becoming dense and of a bright-red color, resembling in some respects when fully formed a red raspberry.

I do not believe in the transmission of syphilis in a properly-conducted vaccination, since there is every reason that the vaccine vesicles formed in the diseased child would be modified in correspondence with the modified lymph, and thus the intelligent physician would at once recognize it as not a true vaccine vesicle. French physicians have experimented with lymph taken purposely from syphilitic children, and watched the result; and in no instance was syphilis communicated. Similar experiments have been performed in Germany, with like results.

A perfect vaccine vesicle, pursuing its regular course undisturbed, is sure to leave an indelible scar, presenting certain peculiar characteristics. A cicatrix, therefore, that is far from being typical is evidence that the vesicle has not been of the true Jennerian type, and that it cannot be so well trusted to afford protection.

In perfectly typical vaccinia, papulation is noticed on the third or fourth day after insertion of the virus; the vesicle begins to form on the fourth or fifth day; the areola should be well marked on the ninth or tenth day, and the crust falls off spontaneously, or can be readily removed, about the twenty-first day. The areola, and some slight febrile reaction which accompanies it, may be regarded as essential to true vaccination.

The usual method of performing vaccination in Germany is by the use of eight-day lymph, commonly practising what is called arm-to-arm vaccination. As I believe that humanized virus in the form of crusts of two or three removes from the cow is almost equal to this, it has afforded me great satisfaction in its use.

While it is desirable that an infant should attain the age of at least three months before vaccination is performed, yet when there is immediate risk of infection no age is too early. I have vaccinated infants on the day of their birth, when the mother had smallpox.

Dr. Barnes thinks we may conclude, in the absence of decisive evidence of special danger, that "pregnant women are entitled to equal protection against smallpox with the rest of the community, and that vaccination should be practised on pregnant women, in their own interest as well as that of the community of which they form a part."

Drs. W. T. Taylor and Albert H. Smith, of this city, fully agree in this.

Yet, with all the mishaps which have resulted from improper vaccination, the disasters arising from it sink into insignificance beside the terrible and too often fatal consequence of smallpox. Where one or two may suffer from vaccination,—either on account of impurities in their own blood or in vaccine matter,—thousands are, by its means, saved from death or from disfigurement for life.

Another evidence of the protection vaccination affords can be seen among physicians and nurses in smallpox hospitals. According to Dr. Welch, during the last ten years (1871 to 1881) no person entering the hospital in any official capacity, whether as assistant-physician, steward, matron, or nurse, or other employé, who had taken the precaution to be revacci-

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nated before entering upon duty, has taken smallpox; but, on the other hand, he has seen a few employés, in whom revaccination was omitted, become infected by the disease.

During the Franco-Prussian war, the badly-vaccinated French army lost over twenty-three hundred men by smallpox. The much larger and thoroughly-vaccinated Prussian army lost only about two hundred and fifty in round numbers from the same cause. Whenever smallpox appears, it can always be traced to careless or non-vaccination and to neglect of ordinary sanitary and quarantine regulations.

In the portions of Chicago, New York, and Philadelphia where smallpox rages more or less every year, the people either refuse or neglect vaccination, or fresh non-vaccinated persons are received into the community; and the disease is often spread by rags, clothing, bedding, etc., which have not been freed from the smallpox infection. As ordinary individuals are incapable of judging of the qualities of a vaccine point or crust, they should never trust themselves to purchase or use it without medical advice. Again, many persons, to save a few dollars, have attempted to vaccinate not only their own families, but others, and the result has been no protection at all.

The following are the different kinds of vaccine virus:

1. Virus direct from the natural vaccinia in the cow.

2. Humanized virus, originally from the natural bovine vesicles.

3. Virus resulting from humanized virus introduced again into the system of the cow and brought back to man.

4. Virus resulting from the inoculation of the cow with smallpox matter.

5. Calf to calf virus, descending through a long line of induced cases of vaccinia.

6. It is not impossible that there is virus from other diseases in the cow resembling vaccinia, and vaccination with which is no protection against smallpox. Jenner in his investigations discovered such diseases. This would account for some cases of post-vaccinal smallpox.

There is a difference in the opinion of physicians as to the value of humanized virus, some claiming that it loses its effectiveness after a long series of transmissions. The observation and experience of Dr. Wm. M. Welch, the physician to the Municipal (Smallpox) Hospital of the Board of Health, Philadelphia, goes to show that the bovine virus supplied by Dr. Martin, of Boston, Massachusetts, is propagated with great care, and can be relied upon to induce vaccinia of a perfectly typical character.

When vaccination is to be performed, it is, of course, desirable that the child should be in a good state of health. Dr. Welch states, however, "I have frequently vaccinated persons suffering from measles, scarlet fever, chicken-pox, etc., and with no unpleasant results, but, on the contrary, have prevented variola."

THE PROPHYLACTIC POWER OF VACCINATION.

In Bavaria and Sweden, where the laws regulating vaccination are perhaps the most rigid, variola has ceased to be an infantile disease. In Sweden, during the pre-vaccination period, from 1774 to 1801, the annual average of deaths per million of inhabitants from smallpox was 1973; after vaccination was introduced, but was not obligatory,—1802 to 1816,—the annual average per million inhabitants was 479; and after vaccination was made compulsory, during the period from 1817 to 1877, the annual average of deaths from smallpox per million of population was only 181. This shows an annual saving of life of 1792 persons out of every million of population by vaccination, and fully justifies the law making it compulsory.

Observations made by Dr. Welch show substantially the same facts. During the last ten years over four thousand cases of smallpox have come under his personal care, and within that period our city has been visited by one of the most malignant and wide-spread epidemics of which we have any record, thus subjecting vaccination to the severest tests; and the results abundantly sustain its time-honored reputation as a most valuable protective agent. Of the four thousand cases the unvaccinated have died at the rate of about sixty per cent., while those having been vaccinated in infancy and showing good cicatrices died at the rate of about ten per cent.

As showing still further the efficacy of recent vaccination, he states that he has more than once seen a recently-vaccinated infant live in an atmosphere charged with variola contagion, and take its usual supply of nourishment from its mother's breast while the mother was suffering from a tolerably severe attack of smallpox, and the

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infant remain free from infection. Surely proof stronger than this is not needed to convince any intelligent thinking person of the prophylactic power of vaccination.

The sooner the profession recognizes the fact that a vaccine cicatrix, however typical, resulting from vaccination in infancy, is not proof of immunity from smallpox throughout life, the better it will be for the protection of the public against the constantly-recurring epidemics of smallpox, because it would lead to a more general practice of revaccination.

Of persons vaccinated in infancy the proportion in youth or adult life who are susceptible to revaccination to a greater or less extent is put down by Dr. Welch at about seventy-five per cent. Dr. Martin's statistics show that with animal lymph his success is exactly seventy-three per cent. at the first attempt. If those cases which fail to be affected at this first trial are twice more attempted, the result is raised to a fraction over eighty per cent. Dr. Warlomont, of Belgium, who has also had extensive experience in the use of animal virus from the calf, gives his success in revaccination as sixty-two per cent., resulting, presumably, from the first attempt.

Revaccination is thought by many to be necessary only where there has been some defect in the primary vaccination, but as it has already been pointed out that smallpox not unfrequently occurs after the most perfect vaccination, it is therefore evident that revaccination should be generally practised, and without regard to the character of the cicatrix. When there is danger of infection, I should say that it is wise to revaccinate all persons who have been vaccinated longer than five years, though children under seven or eight years of age will rarely be found susceptible to the vaccinal effect; but subsequently, particularly about and after puberty, it is of extreme importance that revaccination should be performed.

A very striking example of the value of revaccination is given in a recent number of the *British Medical Journal*. Some eight or nine years ago, when smallpox was very prevalent, the surgeon to a large sailing-vessel discovered, when a few days out at sea, that the captain, in flagrant violation of the rules, had secretly conveyed on board the vessel his son suffering from confluent smallpox. The surgeon at once procured all the vaccine lymph that he could, and revaccinated as many of the crew as it sufficed for. Unfortunately, about one-third or one-fourth of the crew remained unvaccinated. "Of the revaccinated—two-thirds or three-fourths of the whole number—*not a single one* had caught the disease; but of all those who, from no choice of their own, had remained unvaccinated, *all*, or *all but one or two*, caught the disease, and three died."

Only very few persons have been admitted into the hospital under Dr. Welch's charge* with smallpox who presented evidence of having been successfully revaccinated, and these few have had the disease in so mild a form that death has never occurred among them. For the better protection of citizens against so pestilential a disease, which is constantly recurring, and which is frequently most destructive to business and commerce, the propagation of animal lymph of perfect quality is of so great importance to the public that it should not be left solely to private enterprise nor degraded to the level of a commercial trade, but should be under the control of the National or State government, where lymph of undoubtedly good quality could always be obtained free of cost. If this were so, there certainly could be no reasonable objection against the enactment of a law which has been recommended by your committee† making vaccination compulsory.

CONCLUSIONS.

What was the condition of the world prior to the introduction of vaccination?

The physician had no power to prevent smallpox except by the isolation of the patient. The mortality from smallpox was truly frightful, decimating the islands of the sea and destroying whole tribes of Indians.

This horrible and loathsome disease was no respecter of persons. High and low, rich and poor, the prince and the peasant, all were attacked, and few escaped, and of this few who escaped with their lives numerous secondary affections followed it, as disfigurement of the face, diseases of the eyes, ears, nose, throat, and glandular system, with development of scrofula and tuberculosis. Read for yourselves Macaulay's description of the ravages of

* Vaccination, Philadelphia Medical Times, August 13, 1881.

† Meteorology and Epidemics, Philadelphia County Medical Society, 1882.

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smallpox in the seventeenth century, and tell me, would you return to the condition of smallpox uncontrolled by vaccination? We think not.

Has vaccination as introduced by Jenner the power to influence, modify, and prevent smallpox?

A personal experience of thirty-eight years' practice with constant use of vaccination has proved this to my own satisfaction, and a further proof of thousands of cases as vaccine physician to the city of Philadelphia for five years.

It has been stated that by the introduction of vaccine lymph into the system we can introduce diseased material. Is this so?

This can only be done by great want of care and neglect on the part of the physician, by employing imperfect and impure vaccine matter from diseased animals, children, or adults, and for doing this he becomes a criminal; for by the use of pure bovine lymph, obtained from responsible medical men, this crime is obviated.

Is there any truth in the hypothesis that vaccination renders persons more liable to other diseases?

This is entirely contrary to our own and to the whole current of medical experience. We would give the same answer to the alleged statement that cutaneous diseases and glandular swellings follow, or are propagated by vaccination from pure lymph. Erysipelas will be developed in certain individuals by the operation of vaccination, just as it will be by the most simple operation in minor surgery, or even by the scratch of a pin, needle, or thorn, when the blood or the system is favorably disposed. We have never seen syphilis follow vaccination (see our observations in the body of the paper), and we can only understand that such a thing is possible when the child has or has had hereditary syphilis, and the pure lymph develops for a time the disease in the system upon a limited portion of the skin; but even this is doubtful.

Various committees have been appointed to determine by observations and experiments this most important matter, and they have in every instance concluded that such a result as the propagation of syphilis by vaccination was an accident, and was in the system of the individual, and with pure bovine virus this was impossible.

The Mortality from Smallpox after Vaccination.—We have already given the valuable statistics in regard to this point in Philadelphia from a most reliable authority, our worthy President, Dr. Welch. The mortality from smallpox is so diminished among those that are vaccinated that in the metropolis of London it is forty times less than in the seventeenth and eighteenth centuries. There has been in Sweden a complete protection of children, while in this city there has been almost a complete protection. In a recent article on this subject* by Mr. Ernest Hart, an able and reliable authority, he states as his belief, and statistics entitle him to infer, that had the vaccination of the population of London generally been of the same standard of excellence as among hospital patients, there would have been a saving of between fifteen thousand and sixteen thousand lives of children under ten during the year 1881 (an epidemic year), as compared with what would have occurred had all the population been unvaccinated. As it was, there was an actual saving of at least twelve thousand lives.

NOTES OF HOSPITAL PRACTICE.

HOSPITAL OF THE UNIVERSITY OF PENNSYLVANIA.

CLINIC OF LOUIS A. DUHRING, M.D., PROFESSOR OF SKIN DISEASES IN THE HOSPITAL OF THE UNIVERSITY OF PENNSYLVANIA, MAY 1, 1883.

SMALL TUBERCULAR SYPHILODERM OF THE FACE.

THE patient is a married woman, 35 years of age, with a faintly-marked, disseminated eruption occupying the greater part of the face. She is pale, anæmic, spare, and poorly nourished, and has lost flesh during the last two or three years. There is no special history to be obtained, certainly none giving any clue to the initial syphilitic lesion. The eruption consists of numerous, ill-defined, pinhead and small split-pea sized, flat, yellowish, dusky, pale red tubercles, for the most part scattered, but here and there bunched or grouped in an annular form. The lesions are indistinctly defined, paler and smaller than usual, and on this account are difficult to diagnose. They have existed for two years, making their appearance and disappearing slowly from time to time,—upon the whole, undergoing but

* The British Medical Journal, March 31, 1883.

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little change from month to month. If we examine them carefully, we note that they are firm deposits, though they are but slightly elevated above the level of the surrounding skin. They are non-inflammatory.

The diagnosis rests between acne and the small, flat, tubercular syphiloderm. The cold, non-inflammatory character of the lesions, and the fact that the sebaceous glands are not specially involved, decide in favor of the syphiloderm. This eruption I have found more common in women than in men, and, as a rule, in anæmic, debilitated, poorly-nourished individuals. It is of much more frequent occurrence in the dispensary and hospital than in the upper walks of life. The treatment should be a tonic one, and we shall order a good diet, quinine and iron, and iodide of potassium in five-grain doses. She will improve under this treatment, and in the course of a few weeks will be in better general health and will show less of the eruption. Three or four weeks hence she will be in condition to receive the mixed treatment, consisting of doses containing one-twenty-fourth of a grain of the red iodide of mercury and two or four grains of the iodide of potassium. The local treatment will be a lotion of corrosive sublimate, one grain to the ounce.

TINEA SYCOSIS.

The man, 60 years of age, with gray hair, states that the disease of the beard began seven weeks ago, and has been increasing in area and in intensity since, until now it involves the whole of the chin. The hair has been clipped recently, and is in the form of stubble. The disease is characterized by the formation of discrete and confluent, moist or scaly or crusted papules and tubercles, of a cold type, the absence of marked inflammatory symptoms being noticeable. The whole chin has a sycosiform or cut-fig appearance. The hairs are loose here and there, and can be lifted from their follicles without giving pain. They are noted to be dry and to be devoid of the moist root-sheath which adheres to and comes away with healthy hairs when extracted. The subjective symptoms are stiffness and soreness of the whole chin, with burning and pricking sensations.

The disease is to be diagnosed from non-parasitic sycosis by the looseness of the hairs and by the manifestly diseased state of the hairs, which I need hardly tell you are invaded with the vegetable growth, the trichophyton. We shall advise thorough extraction of all loose hairs, and the repeated application of sulphurous acid, in the form of a lotion, one part to two or three of water. Later, a sulphur ointment will be in place. The cure will require probably two months.

LUPUS VULGARIS OF THE EAR.

The patient is a spare, frail-looking woman, 35 years of age, with dark-brown hair, who has a nodular formation of lupus vulgaris upon the right auricle, about the pinna. It is a lobulated tumor-like formation, the size of a hickory-nut. It is firm to the touch, slightly scaly, and of a dull-yellowish, brownish-red color. The yellowish tinge permeating the skin is characteristic of lupus, and is usually much more marked than in tuberculous syphilis, —the only disease with which such a case could be confounded.

The history of the patient is interesting. The disease is of ten years' duration, having increased in size gradually during this period until two years ago, when she first sought our advice. The growth then was more than double its present size. It was operated upon at this time with the knife, and the wound scraped with the dermal curette. It healed over kindly, and the skin remained apparently sound for six months, when it began to show signs of recurrence, and it has been growing since to its present proportions, being a perfect reproduction of the first manifestation. The operation will be repeated, using, however, caustic potash in the place of the curette.

LUPUS VULGARIS OF THE THIGH, LEG, AND FOOT.

The patient is an Italian girl, 18 years of age, who has had this disease since early childhood. She has been treated at this clinic for perhaps a year, but her attendance has been very irregular. She has improved greatly, but there still remains much disease, as shown by the dark-red, brownish, flat infiltrations, papules and tubercles, discrete and confluent, of all sizes, scattered over the thigh, leg, and foot. It is a remarkably extensive distribution of the disease. There are, indeed, so many lesions that without much time and labor it will be impossible to accomplish a cure. She has used, over the whole diseased surface, inunctions with pyrogallic

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acid, from twenty to eighty grains to the ounce, and also sulphur ointment,—both forms of treatment having proved beneficial. Internally, iodide of potassium has been used for long periods with decided improvement. Where the lesions are so numerous and disseminated as in this case, inunctions with stimulating ointments and oils offer the most hope. It is the worst case of the disease that we have ever had at this clinic.

HEREDITARY ERYTHEMATOUS SYPHILODERM IN AN INFANT.

The little patient, two months old, is suffering with hereditary syphilis and with the diffuse erythematous and maculo-papular eruption, which exists upon the buttocks and thighs as a direct syphilitic manifestation. It is characteristic in its features in the present case; but we sometimes meet with erythematous eczema which bears a close resemblance to this syphiloderm, and where one should be cautious in expressing an opinion as to the nature of the disease. In doubtful cases it is wisest to withhold the diagnosis until positive symptoms make their appearance. The distinct infiltration of the skin,—which can be both seen and felt,—the presence of maculo-papules, the brownish or yellowish tinge, the slow course of the process, are all signs which point towards the syphilitic nature of the disease.

ECZEMA OF THE PALMS.

This young woman exhibits patches of chronic erythematous eczema of the palms, of many months' duration. They are better and worse from time to time, as is usually the case. Strong, stimulating remedies are demanded, such as tar or sulphur ointment, white precipitate or calomel ointment, oleate of mercury ointment, or these remedies in various combination, as, for example, equal parts of tar ointment and calomel ointment. As little water and soap as possible should be used, and the ointment well rubbed into the palms for ten minutes, twice daily. Loose cotton gloves should be worn through the day. Several months will probably be required to effect a cure, such cases almost always proving obstinate. Arsenic is sometimes of value, and will be prescribed in this case later should the disease be slow in yielding.

TRANSLATIONS.

INTRAVENOUS INFUSION OF SALT SOLUTION AS A SUBSTITUTE FOR BLOOD-TRANSFUSION.—Dr. L. Szuman reports (*Berl. Klin. Woch.*, No. 21) the following case: A boy, 15 years of age, from being caught in a machine, suffered with a compound, complicated, oblique fracture of the surgical neck of the humerus of the right side, with laceration of the capsular ligament; also a fracture of the middle of the right tibia and the middle of the femur, and some contusions, etc. Excision of the upper fragment of the humerus was performed; the patient was very anæmic, and nearly died from chloroform narcosis, but was revived by injections of ether. The wound was dressed with corrosive sublimate solution (1000 : 2) and free drainage secured; the other fractures were also attended to. At the end of forty-eight hours, although there had been no hemorrhage, the patient seemed to be dying of cerebral anæmia; the lips and conjunctivæ were like wax, there were muscular twitchings of the face, there was great weakness, no appetite, frequent vomiting, and he finally became unconscious and speechless. Infusion of salt solution (sodium chloridum, 6 gm.; sodium carbonatum, 1 gm.; aq. destillata, 1000 gm.) at a temperature of 40° was practised, the median basilic vein being selected. Seven hundred and sixty grammes were allowed to flow into the circulation by gravity from an irrigator, with immediate evidences of improvement. The patient opened his eyes, his intelligence returned, he could speak, and his pulse became slower and stronger, and he was able to swallow nourishment. Subsequently the patient had a prolonged chill, but he had after this no vomiting, and he slowly progressed to complete recovery without any marked elevation of temperature. The reporter believes that there can be no question that the infusion may be properly credited with the favorable result.

This makes the eighth case of complete recovery after the employment of the salt solution for intravenous injection. The author insists upon the use of the vein instead of an artery, on account of greater safety, and advocates the employment of a fine trocar and canula, with an irrigator. He regards the procedure as an immense step in advance in the therapy of acute

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general anæmia, and of the accidental cerebral anæmia following injury to large vessels. The advantages over transfusion of blood, in brief, are:

1. The necessary solution is easily obtainable almost everywhere. In the country, where the apothecary is remote, the physician can himself make the solution of table-salt in pure water which has been thoroughly boiled.

2. No special apparatus is required, a small trocar and canula, an irrigator, and rubber tubing being all that is needed. Careful antisepsis of the wound and instruments should be practised.

3. The application of salt infusion in cases of acute anæmia can be performed much more generally than the transfusion of blood.

THE SIGNIFICANCE OF OXALATES IN THE URINE.—In a valuable article upon oxaluria, Esbach considers the various causes giving rise to this appearance in the urine, and formulates some interesting conclusions. He says that we eat every day more or less oxalic acid in various articles of food, and that this acid, not being destroyed in the economy, constantly passes into the urine in a proportion always small, parallel with the rate of absorption, which itself is very limited.

The absorption of the oxalic acid is favored by the acidity of the gastric secretion, the state of division of the substance containing the oxalate, the state of emptiness of the stomach, and the length of its stay in the acid juice. It is retarded or prevented by the simultaneous use of alkalies, by the mass of the aliments, by the solution or disappearance of the containing substance when this takes place only in the intestine, where the reaction of the fluids is alkaline.

The determination of the oxalate of lime in the urine is possible only when the free mineral acid has been neutralized, which requires, according to circumstances, from several minutes to several days.

The following conclusion is especially important:

"Oxaluria as a symptom of any disease whatever, oxidation, innervation, dyspepsia, hypochondria, etc., is merely an illusion. Those who have believed in it have not been careful to separate as causes of error more than one or two forms of aliment, whereas the subjects were free to swallow oxalic acid in a variety of other forms, of which several, such as tea, chocolate, coffee, are in almost daily use with some people and in some places."

If a case can be found which excretes oxalic acid without having first swallowed it, the author would like to see it. Thus far he had never succeeded in detecting oxalic acid in the urine during a milk diet, nor in one under an aliment free from oxalic acid.—*Bulletin Général de Thérapeutique*, May 15.

BILIARY COLIC DURING AND AFTER PARTURITION.—That some connection exists between pregnancy and attacks of biliary colic of the nature of cause and effect seems to be no longer doubted; the concurrence is too frequent to be merely accidental. Dr. J. Cyr has recorded fifty-one cases coming under his personal observation, the observation of which has led him to certain conclusions, of which we can only give a brief outline. The period at which these crises appear is variable; the author has witnessed them at all stages of pregnancy, and even twelve months after its termination. In thirty-six cases they occurred after delivery, in twenty-two of which, however, it was less than one month. M. Cyr attaches importance to heredity in the etiology of this affection, and especially to the arthritic diathesis. Generally biliary calculi have a tendency to form, either as a result of some modification in the composition of the bile, or from a slowing in its circulation, or from an obstacle in its way through the biliary passages. During pregnancy there is a certain amount of fatty degeneration of the liver: it is possible, therefore, that the bile under such circumstances is not quite normal, although no analysis has yet been made to establish this as a fact. Besides this, there is the compression of the other abdominal viscera by the gravid uterus, causing a stasis or slowing of the course of the bile,—a condition eminently favorable to the formation of gall-stones. These observations appear in the form of a monograph.—*La France Méd.*, No. 60.

NERVE-STRETCHING FOR NEURALGIA.—A case in which an obstinate neuralgia of the second branch of the trifacial nerve was relieved promptly and permanently by stretching the superior maxillary nerve, is reported by Lemaistre (*Revue de Chirurgie*, 1882, No. 12).

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PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, JUNE 30, 1883.

EDITORIAL.

FIRST AID TO THE INJURED.

A PHILANTHROPIC movement, inaugurated some six years ago in England, having for its objects the establishment of an ambulance-service and the diffusion of instruction upon the treatment of the injured in emergencies before the arrival of a physician, has attained such vast proportions as almost to mark an epoch in the history of medicine, and it is impossible now to declare what its ultimate results will be. Those of us who are especially interested in higher medical education, and are solicitous with regard to raising the standard of medical practice, will here find much encouragement. Every agency tending to better qualify the community to appreciate true medical skill, and to detect and reject the devices of charlatanry, must indirectly benefit the medical profession, and should upon this account—if on none other—be welcomed and endorsed. A people easily satisfied in the matter of medical attendance are easily duped by a pretence of medical knowledge: here imposture fattens upon ignorance, and all forms of quackery may flourish. Any organized attempt, therefore, to enable the community to be more discriminating, and to better appreciate the value of properly-qualified medical assistance, is one which should be heartily approved and aided by the profession. We will briefly review the history of the remarkable development of this humanitarian project, the consequences of which cannot at present be properly estimated.

In 1877 a committee of the Order of St. John of Jerusalem was formed, which was called the St. John's Ambulance Association, the objects of which, as already stated, were to provide ambulance-wagons for removing cases of accident and injury to their homes or to the hospital; and, secondly, to establish free courses of lectures upon the accepted methods of rendering first aid to the injured. The efforts of this association were attended by such unexpected success that the movement rapidly spread through Great Britain, and through the zeal and activity of Prof. Esmarch it was also introduced into the larger cities of Germany. To these public lectures large numbers of people have gone, and have shown much interest in the subjects taught; but it is in the police force that the most evident fruits have been everywhere noticed, in the improvement in the treatment of accidents on the streets, and their behavior in surgical emergencies. A similar organization, established in New York in 1882, followed very closely the character of the movement in Europe, and has been so satisfactory in its working that it is now engaged establishing branch-societies elsewhere in the State.

The Philadelphia Society for Organizing Charity has once more demonstrated the wisdom of its management and its true benevolence by introducing a course of lectures on "First Aid to the Injured" in this city. The series of lectures delivered by invitation of the mayor of the city by Dr. J. William White before the police force has already yielded sufficient fruit to demonstrate conclusively both their necessity and their value. We therefore heartily approve of the resolution offered by Prof. D. Hayes Agnew at a recent public meeting of this society, which committed the society to establish such courses of lectures on emergencies or first-aid to the injured after the methods employed by the "St. John's Ambulance Association" of England, of the Esmarch "Samaritan Schools" of Germany, and of the "Society for Instruction in First Aid to the Injured" of New York.

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The announcement has been made that this society will in the future annually award a suitable medal, similar to that given by the Humane Society of England, to that officer of the police force who shall during the year have most distinguished himself in the relief of suffering or the saving of life. Such benevolent enterprises will find hearty support in this city if Philadelphia deserves its name.

THE MARINE HOSPITAL SERVICE AND ITS ABUSES.

IT is to be expected that the great dignity which has always set so nobly and closely about the person of the supervising Surgeon-General of the Marine Hospital Service would cause him to break forth into violent and indiscriminate denunciation when adverse criticism reaches his ears. Hence, that he should make a bitter personal attack upon the editor of this journal in reply to our recent *exposé* is but natural. But it may well be asked, Will this Surgeon-General ever grow old enough to know that calling names may ease the feelings but rarely influences the judgment of men? What is wanted in the present case is a formal denial of these asserted facts,—that more than a million of dollars have been wasted in hospital building, that there is a strong tendency to continue the wasteful process, and that the tax laid upon sailors for the maintenance of the Marine Hospital Service has been doubled without obvious advantage to the sailors.

The pages of the *Philadelphia Medical Times* are, as they always have been, open to the supervising Surgeon-General for refutation of these assertions; and a quiet counter-statement and explanation would certainly be useful and entertaining.

If, however, these ugly facts were shown to be not what they seem, the medical profession would still owe a debt to the Marine Hospital Service. It is a serious thing to every one interested in the progress of medical science, and especially to every American physician who has any pride of country, to have the very important series of researches which a few months since were being carried out under the auspices of the National Board of Health suddenly strangulated; and it will not be our fault, at least, if it is soon forgotten whose hands tightened the cord with fatal force and skill.

CORRESPONDENCE.

LONDON LETTER.

THERE are no matters of great medical interest at present engrossing the attention of the profession. The bill which is to be so beneficial to the profession is not making much progress with the Parliament encumbered with too much to do, and a persistent party doing its best to prevent anything being done, so it cannot be utilized any further for my purpose. Consequently, some topic must be found which is likely to interest your readers; and the most promising one at this season is, in all probability, that of the best plan of cooking fruit to adapt it to the requirements of invalids of all sorts, and those persons who are the subjects of gout or glycosuria,—in fact, a very large class of persons with whom such stewed fruit is apt to disagree. In the one case the sugar is apt to undergo the acetous or some similar change; in the other, it feeds the glycosuria. With a large class of physicians sugar is a forbidden article as such, and as being injurious to the bilious. But I join issue with these gentlemen as to the fact of sugar being undesirable for bilious persons. Bile is not formed from the saccharine but from the albuminous elements of food. The bile-acids both contain nitrogen, and one contains sulphur: neither of which bodies is formed from sugar. But both exist in albumen. It is difficult to conceive the idea of the bile-acids being built up by synthesis in the body from sugar, plus other matters, when substances containing these elements exist naturally in the system. It is all Lombard Street to a China orange in favor of the bile-acids being formed from albuminoids in their retrograde metamorphoses, rather than being made by synthesis. Synthesis is not the characteristic of animal life. Vegetables build up substances from carbonic acid gas, water, and ammonia. Animals break up these formed products by oxidation again into the primitive materials from which the vegetable built them up. Bile-acids are then the products of excess of albuminoids. If

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the latter are not taken, or are very sparingly taken, then bile in excess cannot be formed. In practice it is found that a hydro-carbonaceous dietary is best suited to the bilious, provided that you can induce them to give it a fair trial. No one will attempt at the present day to say that gout-poison is formed from sugar. But all will agree that there are cases where sugar is a veritable poison. It upsets the stomach and produces acidity almost as soon as taken. Sugar, then, is very objectionable to many persons. In certain cases where a surfeit of food is eaten, the readily-combustible hydro-carbons are burnt up by the respired oxygen, leaving the less readily oxidizable albuminoids for the liver to deal with. Some ought to go to the serum albumen of the liquor sanguinis for the nutrition of the tissues. The overplus, the *luxus consumptionis*, is converted into bile-acids or urine solids. But when the liver is embarrassed by too much work being thrown upon it, it becomes disordered, and then probably little or none of the albuminoids are passed on to the blood, but all are driven down into bile, or lithates, according to the form of trouble to which the bilious individual is liable. But a great many persons do not eat to repletion, and only take moderate amounts of food, and yet in summer are apt to be bilious or gouty. Now, with such persons, abstention from all or almost all nitrogenized food is very desirable. Some creeled rice, or rice well boiled in milk and poured into a mould to cool, and when cold turned out *en masse*, and stewed fruit, is the typical dietary for such persons in hot weather. It is both palatable and suitable to their body-needs. How dreadful! some readers exclaim. Very likely; but for hot weather such dietary, with milk and seltzer water, or claret and some effervescing water,—one might mention some, but then the enterprising firm which owns it would seize upon it and convert my expression of opinion into an advertisement, and so get me into hot water,—or other combinations, for a beverage, is the thing to strive after; or, if so disposed, some good coffee and cream, allowed to cool, or, still better, iced, may be made the beverage. Such would form a capital breakfast for a fastidious eater, or one who suffered from acidity after food, or from biliousness or gout. But then it will be objected, "My stomach rebels at sugar;" or, "I get such acidity;" or, "Sugar makes me so bilious;" or the glycosuric patient says, "So much sugar will give me the sensations of diabetes." Quite so; and like enough all of them speak the truth. Especially is sugar objectionable to that by no means small class of persons who pass small quantities of sugar in their urine at all times, but who can give themselves the symptoms of "classical diabetes" in a few hours by taking a quantity of manufactured sugar. The sugar passes freely into the blood, and has to be washed away by copious draughts of fluids, rushing the sugar out by the kidneys. But because sugar either starts up diabetic symptoms, or undergoes acetous fermentation in the stomach, it does not therefore follow that sub-acid fruits are to be forbidden. Not by any manner of means! The only matter is, how are these fruits to be prepared by the cook so that such evil results as those above mentioned shall be obviated? That is the practical hitch! The sweet white powder which the Saracens procured, and which the Crusaders brought back with them, has enabled many fruits to be cooked which before that time must have been practically beyond the reach of man; as honey would scarcely make a pleasant mixture with them. The cook masks the excess of acidity by sugar, and then the palate is appeased. This is all very well for children and those who not only like sugar, but with whom it agrees; but for a large number of persons such sugary mess is literally a poison. There may follow gastric symptoms, or, with the rheumatic person, symptoms of rheumatism, possibly from the formation of lactic acid. Consequently, there are positive reasons why sweets should be abandoned in sundry cases, beyond the mere dictum of a physician whose physiology is a little antiquated. Of recent years it has become the practice of thrifty housewives to instruct the cook to put some bicarbonate of soda to fruit when stewing, to reduce the quantity of sugar otherwise required to make the mess palatable. But then all housewives are not bent on thrift, and this practice is far from being as universal as it is desirable it should be.

Science makes its way down-stairs slowly, and preconceived opinions rule on the basement-floor. Consequently, many still go on with sugar only, masking the acidity with sugar till the compound is cloying to the palate, instead of partially neutralizing the acidity with an alkali and thus reducing the necessity for such excess of sugar. Some time ago I had to visit a Chancery lunatic in Warwickshire who was liable to gouty attacks. When she became more violent, any more excitable, than usual, no medicine would she take; but she was fond of stewed fruit. Bicarbonate of potash was used, instead of bicarbonate of soda, in preparing her stewed fruit, and the uric acid was quickly removed. Thus she was successfully treated for her gout without any difficulty. After this I instructed my cook to try all the fruits in their season with varying quantities of potash. It was found, as the result of many experiments, that the amount of bicarbonate of potash required to neutralize the acidity of all our ordinary English fruits was about as much of the alkali as will lie upon a shilling to the pound of fruit, or the same quantity of the bicarbonate of soda. If more than this quantity of alkali was used, there was apt to be the soapy taste of the alkali to be detected. If less, the acidity was too great to be palatable.

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Perhaps a little less alkali might be desirable in some cases; but with our acescent fruits that was the amount that was found desirable. Fruit to which this dose of alkali was added, when put into the oven to stew (without any sugar whatever being added), is quite sweet enough for many palates, certainly for those persons who are not fond of sweets. My personal experience has been that for gooseberries, black, red, and white currants, for apples, pears, and plums, as much bicarbonate of potash as will lie on a shilling to the pound of fruit made a most palatable compound. By so neutralizing the acidity the natural sweetness of the fruit is brought out, and this is quite sufficient for most adult palates. Such stewed fruit, with cream- or milk-pudding, experience has taught me, is readily taken, and, more than that, agrees capitally with many persons who could not take stewed fruit as ordinarily prepared without suffering for it. By such culinary treatment many patients have not only been able once more to enjoy stewed fruit, but many have felt themselves decidedly benefited by the potash which they received in their fruit. Where alkalies are repugnant, as is the case with many persons, this method of administering them will be found to be free from *désagrémens*. It is at once efficient and unobjectionable. Where there is a gouty taint, the amount of alkali which can be so taken is quite sufficient to neutralize the amount of uric acid formed daily. In cases where the excess of sugar produces acidity in the stomach, in those cases where the excess of lactic acid excites rheumatic pains, in cases where much cane-sugar produces such glycosuria as is very disagreeable, this plan of treating fruit, when preparing it for the table, will be found most acceptable. There are sundry salts in fruits, as potash in the strawberry for instance, which make them very useful to persons of the lithæmic diathesis, and eaten uncooked they are generally admitted to be useful as antiscorbutics. But the sugar required in their cooking rendered them objectionable, and so they were forbidden. Now, however, by this plan, stewed fruit is not only as acceptable as fresh fruit, but is even more useful where there is an excess of uric acid formed. There are some matters of detail to be mentioned, in order that the subject may be fully comprehended in all its bearings. The first is, that the addition of the alkali affects the color of some of the darker fruits,—as the black plum, for instance. These fruits are of a fine, rich, deep-crimson shade as prepared with sugar only; and the addition of an alkali, whether soda or potash, gives to the product a dingy-brown shade which is neither so pleasing to the eye nor so tempting to the palate. It is easy, however, for the cook to remedy this by the addition of a little cochineal, which restores the desired color and has no drawback of its own. Where the appearance is important, or thought to be important, it is easy to maintain it,—easier, indeed, than it is to maintain appearances in most relations of life. Then there is the matter of rhubarb, which, though not a fruit with the botanist, is practically a fruit in the cook's eyes. It is a pleasant esculent at a time of the year when fruit, except preserved, is unattainable. As ordinarily prepared with sugar it is suitable for the nursery and for the breakfast-table, but it is usually shunned by the invalid. The sugar it requires for the neutralization of its acidity unfits it for the stomach of all persons troubled with acidity, while its oxalate of lime often disagrees markedly with the gouty. Perhaps as regards the oxalate nothing can be done, but as to the acidity it can be managed. It must be borne in mind, however, that rhubarb possesses no natural sweetness, so far as my knowledge extends, and therefore, if its acidity be completely neutralized by an alkali, no flavor remains: it is simply a cold mess, without any attraction for the palate. It is desirable in its case to partially neutralize its acidity by half the quantity of alkali given above, and to add a little sugar. So treated, it is quite palatable, and, if not rendered quite unobjectionable, is at least much less likely to disagree than where no alkali has been used. By such handling stewed fruit can be recommended to invalids and those whose livers are more or less incapable organs. Where there is much gastric acidity following the ingestion of sugar, this method obviates it almost entirely; and where there is distinct lithiasis, if prepared with potash, stewed fruit might be converted into a good prophylactic measure. The glycosuric aspect of the subject is one upon which I invite the attention of my readers. In those cases where the surplus sugar is not converted into fat in the body, and, still more, in those cases where there is distinct corpulency and where much sugar is transformed into fat, and yet a surplus remains, which drains out of the kidneys, giving glycosuria, all are pretty well agreed that cane-sugar is undesirable. The system seems to get on very pleasantly with a farinaceous diet, but the addition of cane-sugar is quickly felt by subjective symptoms and the free flow of glycosuric urine. There may be nothing injurious in this,—there is no valid proof that sugar is more injurious to the renal vessels than it is to the portal vessels,—but it is unpleasant, to say the least of it. Now, in such cases a dietary of milk and farinaceous food, with stewed fruit prepared with an alkali, is much more desirable than the rigid "diabetic dietary," where starch and sugar are eschewed and large quantities of animal food are permitted. In such cases the dietary is often more harmful than the malady, and the excess of albuminoid material disturbs the liver and certainly injures the kidneys. And if many readers do not agree with me in this, there are others that will hold with me. The glycogenic function of the liver and

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its second function of the metabolism and elaboration of albuminoids must never be forgotten when either function is disturbed. To feed the patient on other than saccharine food, positive or potential glycogen, is the right line to pursue when the glycogenic function of the liver is completely upset: the patient must be fed on something which does not pass through a grape-sugar stage (in which it drains out of the body, leaving the patient hungering). But in ordinary cases where the patient is well nourished the drain of sugar is comparatively unimportant. The class of people, however, who suffer from disturbances in the second function of the liver are those most interested in what has just been said. Where the liver is almost incapable of dealing with albuminoids, and converts them almost wholly into bile-acids or lithates, as the case may be, then a non-albuminous dietary is clearly indicated. Of course some albuminoids are essential to life. Further, it seems to me that fibrin-albuminoids—that is, flesh-albuminoids which are converted into peptones by pepsin-digestion in an acid medium—are more liable to go wrong in the liver-metabolism than are caseine-albuminoids, which are converted into peptones by trypsin-digestion in an alkaline medium. This hypothesis may not be strictly accurate, but it will be found to be "a good working hypothesis" all the same. Clinically it is certain that a milk-dietary is much less objectionable to lithæmic persons than one which comprises much brown meat,—that is, the flesh of the larger animals. There is another clinical matter to be remembered, and that is, meats and meat-broth are apt to purge, while caseine is constipating. To a milk-dietary, then, the addition of stewed fruit is desirable, as helping to relieve the constipation which would otherwise be liable to be set up. Indeed, to a large class of persons—dyspeptics, gouty, bilious, and glycosuric—a dietary of farinaceous food prepared with milk, and stewed fruit where the acidity has been neutralized by an alkali instead of being masked by an excess of sugar, is clearly indicated. Where there is a decided formation of uric acid, the fruit should be prepared with potash, and then the dietary is not only suitable, but it contains a distinct proportion of a uric-acid solvent. Between this last and the caseine-albuminoid, the gout-element in the case can almost be eliminated. For those whose livers convert albuminoids into bile-acids such a dietary is equally desirable. For its adoption the casting off of one or two impressions formed in the fancy of physiology, and the adoption of some of its more recent teachings, together with what Garrod has taught us as to uric-acid solvents, alone are requisite. By such a dietary as has just been sketched a large class of persons would be materially benefited.

J. MILNER FOTHERGILL.

THE HYGIENIC EXHIBITION IN BERLIN.

TO THE EDITOR OF THE PHILA. MEDICAL TIMES:

DEAR SIR,—Those of your readers who may be within reach of Berlin this summer will make a great mistake if they fail to visit the Hygienic Exhibition now in progress there. Seen shortly after the opening, when the Main Building was still unfinished and many of the exhibits not yet in place, four or five hours were readily spent in a cursory inspection, which showed a hundred departments worthy of extended study. It is located just across the river from the Siege Column, only about a mile from the Brandenburg Gate, while the elevated city railroad lands passengers at the Lehrte Station, just outside of its gates. The grounds are already quite beautiful, although much remains to be done in the way of adorning them. The elevated road runs through the centre of the grounds, and forms a striking feature, since it not only does not mar their appearance, but, by the utilization of the brick arches upon which it is raised, furnishes a long series of chambers for the display of the exhibits. The Main Building is already handsome, and when its dome is completed will be a fine specimen of that kind of structure.

As to the exhibits, of course a mere enumeration of departments would require pages; a few notes may, however, prove of interest, though it is hard to know where to begin. To begin backwards, cremation seems to be receiving no little attention at present: furnaces and apparatus of all descriptions are here to be seen in plan, model, or actually complete and ready to demonstrate their advantages,—some simple and apparently inexpensive, others handsome, church-like structures, in which the funeral rites might take place, and the body be lowered into the vault below, to be automatically returned, completely incinerated, and enclosed in its urn, ready for removal or deposit in one of the niches which line the walls. The elaborate structures, permitting the continuance of the forms which time has endeared, may doubtless do much to remove the prejudices which rise against this form of burial; the simpler will bring it within the reach of many now debarred by expense from its sanitary advantages.

Turning to the exhibits of foods, their profusion is bewildering. Milk, that all-important factor in child-life, receives due attention. All methods of transport are illustrated, the methods of preservation shown, and samples of the results are everywhere offered to all who will test them by taste or with the appliances provided, while one exhibit is crowned by a photographed army of bottle-fed babies,—flattering, if correct. Desiccated and canned foods of every description abound, and model kitchens and cooking-schools offer their re-

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cipes and their products on every side. In this connection the models showing macroscopic veterinary pathology deserve more than passing mention. Diseased meats of all kinds are here shown, and in a practical shape that is capable of disseminating useful knowledge of these matters among the butchers and the more deeply interested general public. Bearing on the same questions is the model government physiological and chemical laboratory, with one of Koch's assistants in charge to demonstrate the work in which he is now occupied,—the study of the fermenting agency in the souring of milk and the moulds affecting various articles of food. Elaborate apparatus of every kind, for the discovery, separation, culture, and study of the lower forms of life, opens the eyes even of those who have themselves done no little work in this direction, and speaks well for the perfection of the means employed by Koch in his investigations. This alone would demand at least a day for its study.

The subject of fuel is elaborately treated, beginning with a model of a mine, with its galleries, tramways, tools, ventilating and lighting apparatus, and the means of rescue in accidents, and going through all the forms of fuel to the innumerable fuel-economizing stoves and furnaces. In the last connection insulated guards to hold the person away are not unworthy of notice, though constituting but an inconspicuous group among the countless similar guards applied to all forms of machinery in the use of which life and limb are in jeopardy. Life-saving apparatus for beach, vessels, and ice forms an interesting exhibit of how the dangers of water may be met; while plans and models of improved ship-construction, light-houses, buoys, etc., show the means of avoiding many of them. Diving-apparatus is well represented, and the tank in which its uses are shown seemed to draw and hold a throng of spectators. Fire apparatus has a large exhibit, and the life-saving apparatus is admirable, as is also the display of fire-proof materials and construction; but the engines shown are puny affairs in appearance, and the models of stations promised only a German realization of promptitude in getting under way. Probably the destruction by fire of this exhibition last year affords no uncertain evidence on these points.

Clothing and household hygiene receive their due share of space, but are far from taking the place of prominence which one would expect until he has seen how comprehensive the exhibition is. The hygiene of home-, school-, barracks-, and prison-construction is elaborately and worthily portrayed, and deserves most careful study here, familiar as these subjects are now becoming. But when your correspondent reaches the matters of hospital and, more strictly, medical hygiene, he feels that he had better stop. The general character of the exhibit every medical man knows: its fulness here must be seen to be appreciated. All that is new in instruments, apparatus, and conveniences may here be found with comparative ease, for the display is generally admirably systematized; but one is none the less bewildered by the innumerable objects that attract his eyes and fairly represent every ramification of our art. The military side is especially well represented, not only in general but by the government exhibits. To say that there are at least a hundred forms of ambulance shown may give some basis for an understanding of the space given to the means of transport of sick and wounded, since litter-, pannier-, railway-, and ship-transport are equally well represented. But this letter is probably already too long, and, although much still remains to be written about, it must be brought to a close.

I am very respectfully yours,

B. ALEX. RANDALL.

VIENNA, June 2.

PROCEEDINGS OF SOCIETIES.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

A CONVERSATIONAL meeting of the Society was held at the hall of the Society, April 11, 1883. Dr. De Forest Willard read a paper on "Adherent and Contracted Prepuce" (see page 669).

DISCUSSION ON DR. WILLARD'S PAPER.

Dr. J. M. Keating opened the discussion, remarking that he had seen many instances similar to those mentioned by Dr. Willard. He had very lately spent considerable time in examining in the Hospital twenty-two cases at the ages of from three weeks to fourteen months, the average about three months old. All these children had been in the house since birth, so that the history of each was well known. In three of these the prepuce was adherent and the circumcision was required: he felt satisfied that stretching would be of no value. These children presented no special nervous symptoms; they were quite young; but there was constant dribbling of urine, which scalded them. In fact, the condition in babies with long prepuces and very narrow openings is very obstinate, and frequently is in itself an indication for the operation. In five of the cases retraction of the foreskin was easily accomplished,—a large percentage. Of the remaining seventeen it was impossible to retract the foreskin, and in most of them the opening was pin-hole in character, but there was no adhesion to the glans. In these cases probably Dr. Willard's procedure could be of service. At the teething-age—the age of convulsability—anything that will cause nervous irritation will be followed by reflex phenomena, and he has seen the greatest variety of male neuroses cured by circumcision. Where

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there is the least suspicion, or in any case where the foreskin is unusually long, he strongly favors circumcision. The simplicity and harmlessness of the operation, when properly performed, are in its favor. Of course, for mere fashion no operation is permissible. He was recently informed by a fond mother that it was now fashionable in New York, and he was urged to operate on her infant boy, as she proposed to spend the summer at a well-known New York watering-place.

Dr. C. T. Hunter thought that adherent prepuce might be caused by uncleanliness, which led to inflammation. Whenever it was possible to push the prepuce back a short distance, he preferred to do this rather than operate. We should not operate, even in the simplest way, unless necessary. He detailed a case in which stone in the bladder was supposed to exist, and prior to operating he advised careful inspection of the penis, which being done, adherent prepuce was found; this being relieved, the symptoms of calculus disappeared. An older boy in the same family, suffering from a cough, was greatly benefited by a similar stripping back of the foreskin, which was found tightly adherent. He also has seen a case simulating coxalgia cured by similar means. The absence of reflex symptoms in the children in charity hospitals is apparently explained on the ground that these effects are seen principally in children of the better class. He agrees with Dr. Willard in opposing circumcision. As an operation, it does not protect from venereal disease, for Hebrews contract these diseases as easily as other races.

Dr. Mills agreed with Dr. Willard. He had seen many cases of priapism, and even a form of sexual excitement, in children not over two years old, from preputial irritation; he had even seen convulsions which were apparently relieved by operation. Some cases, however, are erroneously reported: thus, he had known of a case of hystero-catalepsy with rotation, which was found to have an elongated and contracted prepuce. This was operated on, and the patient was reported cured, but the disorder of movement returned. He had seen very few cases of chorea which were certainly attributable to this condition. Too much stress is laid upon reflex paralysis. In the course of ten years he had seen many cases of the paralysis in children, but only in one of these did the symptoms disappear after removing the adhesion of the prepuce. In two cases of doubtful character the mothers had refused to allow circumcision. He had also recently seen a case of a boy of sixteen who had contractures, and in whom was found a remarkably adherent prepuce with a hard mass of smegma.

When Dr. Sayre's cases are carefully examined, many will be found not to be cases of reflex paralysis. In regard to hernia, he recalled the cases of two patients, brothers, who had hernia and convulsions, and in one of whom he found adherent prepuce, and in the other the same, with twisted penis.

Dr. Little referred to the absence of ill effect from adherent prepuce among the infants in the Infants' Hospital, Randall's Island, New York City: no operation had been performed while he was on duty as resident. While resident physician to the Children's Hospital at the same place, the ages of the inmates varying from three years to nearly adult life, he observed no ill effect, nor was treatment required. A physician examined the boys both in this hospital and in the House of Refuge with reference to the effect of masturbation on the heart, and observed incidentally the absence of adherent prepuce in this class of boys. Dr. Sayre's cases, on the other hand, were from a better class of society.

Dr. Waugh said that in the last two years he had met with four cases not susceptible to the method advocated by Dr. Willard. He had in these cases forcibly dilated the foreskin by a pair of forceps so as to rupture the mucous membrane, and the contraction following the healing of this wound shortened the prepuce to the proper length. From these cases he concludes that circumcision is not necessary.

Dr. Woodbury endorsed the views expressed by Dr. Willard. Surgical specialists are responsible for the too indiscriminate performance of the operation of circumcision. He thought that civilized communities might find a useful example in the custom of the Feejee Islanders, with whom it was considered a social duty to preserve the foreskin of sufficient length to cover the glans penis, it being considered highly indelicate, if not actually immoral, for a youth to have the glans uncovered, this being about the only article of covering they do wear. The fact that the Hebrews, although employing circumcision for many centuries, are still obliged to resort to circumcision, seemed to him a remarkable exception to the so-called law of natural selection. Jewish children, he thought, should now be born without any foreskins to cut off. He did not agree with Dr. Keating that circumcision was required in cases of long foreskin with scalding for urine, without any other complication to warrant its performance. He has found cleanliness and the use of cosmoline put in under the prepuce with an ordinary glass dropper each night, sufficient to relieve simple cases. If the urine is abnormal and irritating, the diet must be corrected; meat and nitrogenized food need to be cut off,—not the prepuce. It had been claimed that circumcision of boys should invariably be performed in order to prevent masturbation; but he had yet to learn that Jewish boys are more moral in conduct or conversation than the uncircumcised. He believed that the cause of masturbation lies more deeply seated than the foreskin.

Dr. James C. Wilson regretted that he had

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been unavoidably prevented from being present during the reading of the paper. He had examined many children, and is sure that reflex action from preputial irritation often exists. The irritation developed by teething will be supplemented and exaggerated by the existence of adherent prepuce. These reflex actions will be relieved by removing the adhesions, or more perfectly by the operation of circumcision. He has seen cases of imperfect nutrition arising undoubtedly from contracted foreskin,—cases in which food is taken in quantity but does not nourish. These cases have been relieved by repeated dilatation of the prepuce, or by circumcision. He believed the latter operation not only justifiable, but even in certain cases necessary.

Dr. Wm. S. Stewart referred to the cases of two brothers, both affected with adherent prepuce, which was the cause of trouble. In one case circumcision was tried without satisfactory result; in the other case, which was under his own care, he decided to try a different method. The prepuce was very tight. He placed the child under ether, and with a three-pronged (tracheotomy) instrument dilated the foreskin and stripped it back over the glans. The operation was much more satisfactory than that in the other case, and he considered it better than circumcision, and has adopted the above method of treating all congenital cases ever since.

Dr. Willard, in closing the discussion, said that, in regard to very young children, such as those examined by Dr. Keating, it would seem that their very youth is the reason that no nervous symptoms have been produced: the future might develop various troubles. The practical point is, if the dilatation is so easy that it can generally be done by the patients themselves, what necessity is there for circumcision? We must, moreover, not make the mistake of supposing that, because adhesion exists, it is necessarily the cause of every nervous trouble that may develop in the patient. When stripping is possible, it is preferable to circumcision; but this latter should be performed if the simpler operation cannot be done.

DISCUSSION ON EPIDEMICS.

Dr. Laurence Turnbull opened a discussion of the report of the Committee on Meteorology and Epidemics by a paper on "Vaccination" (see page 676).

Dr. Woodbury said that he had called for a discussion upon the report of the Committee on Meteorology and Epidemics, partly on account of the very interesting character of the report itself, but principally because, by a provision of the By-Laws, the attention of the Society had just been officially directed to the question of epidemic disease and public sanitation, and in a sense it is the duty of the members to embrace this special opportunity to discuss these important questions presented for their consideration. The report for this year informs us that smallpox, after five years' prevalence, still exists in this city, although on the decrease,—probably because the susceptible material has become exhausted. It becomes the duty of all physicians, in a community in which epidemic disease prevails, to examine the subject carefully, and to ask, Is everything done by the city authorities that should be done in the way of prophylaxis and public protection? Vaccination, it is true, is pretty generally carried out in this city, and full acknowledgment should be made of the efficient work that has been done in this direction. But all our efforts at prophylaxis should not be allowed to stop with vaccination. Prompt and thorough disinfection of premises and destruction of fomites are required, and also the most complete means that may be devised for the isolation of individual cases of disease. He asked if in the city administration satisfactory arrangements exist for the disinfection of articles too valuable to be destroyed. He believed that the accommodations for transporting patients to the Municipal Hospital are altogether insufficient, and unworthy of a great city like Philadelphia. The sick are sent to the hospital in an ambulance carrying several at once, some possibly not affected with smallpox; and these non-variolous cases are put in the same hospital ward with the infected patients. There should be a pavilion ward for the reception of all cases where they could be kept isolated and separate from others until the diagnosis is made out. The means of preventing the extension of typhoid fever also deserve our most careful consideration. Its modes of communication are now well understood, and the links in the pathological chain—patient, alvine discharges, drinking-water, patient—are just as clear and certain as those of the evolution of tænia. Systematic disinfection of the discharges only is necessary in order to check the progress of typhoid fever; and in Paris physicians are asking that such disinfection of the discharges shall be made compulsory by law. He believes that the best and cheapest disinfectant for this purpose is the common ferrous sulphate—green vitriol—used freely.

Dr. S. Ashhurst said that the disinfecting furnace at the Municipal Hospital in this city is the best of its kind in the country. It has a large vaulted chamber, in which a temperature of 300° F. can be easily obtained, and a chamber in which articles can be exposed to chemical disinfectants. That the means of conveyance of patients to the hospital are insufficient when the cases of smallpox are numerous, is not the fault of the Health Board, but lies in the small appropriations granted by City Councils. He agrees with Dr. Woodbury that in typhoid fever complete disinfection of the discharges is the most efficient method of preventing the spread of the disease.

Dr. J. L. Ludlow suggested that one of the

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worst features of our sewers is the numerous man-holes at the street-level. These allow the escape of sewer-gas, especially at night, at just the level at which it is likely to be inhaled. They should be closed up, and ventilating columns inserted at street-corners. In his own house he found vapor issuing from the water-spout, and, on investigating the matter, found that a communication with the sewer existed and the spout was acting as a ventilating column. Dr. Ludlow also called attention to the satisfactory operation of the old form of filter, known as the "Oliver Evans Filter," for the purification of drinking-water. He had used one with good effect for fifteen years without repairing, and had perfectly pure water and tasteless when others were sorely complaining, as Dr. Leffmann will testify.

Dr. Holt said it would be a waste of time for the Society to discuss any other method than vaccination for preventing smallpox. It was the best method. In typhoid fever the safe disinfection of the discharges is only attained by burning them.

Dr. Welch said that Dr. Woodbury was mistaken in some points. The ambulances used for smallpox patients are two in number, and the best in the city. A special bed-wagon is also in use. It is true that, by the blunders of physicians, patients not affected with smallpox are often sent to the hospital; but in such cases protection is generally afforded to the patients by prompt vaccination. Among this class of patients he could recollect only one or two deaths, during the last twelve years, from smallpox contracted in the hospital. In one of these cases vaccination had never been performed, not even in the hospital,—a very unusual and unaccountable oversight.

Dr. J. M. Keating made the following remarks:

"The specimens which I show you this evening were removed to-day from a child who died in the Children's Asylum of the Philadelphia Hospital. I am indebted to Dr. Henry, resident physician, for an outline of the case, which was an ordinary one of pneumonia of the base of both lungs. The child had been four days ill, was doing well, when unusual symptoms of dyspnœa presented themselves, and presently death ensued from convulsions. Dr. H. F. Formad, in making the post-mortem, noted double pneumonia of the base in the first and second stages, and special complications. The child presented the outward appearance of scrofulous diathesis, the lymphatic ducts being enlarged throughout the body. When my attention was called to the specimen, I noted enormous distention of the right heart, and also the firm systolic condition of the left ventricle. My attention was also called to the enlargement of the bronchial glands, and I specially noted a group which pressed upon the pulmonary artery about one inch from its valves, which pressure had caused a decided indentation at that part. I opened the right ventricle, and found it to have been distended by fluid blood, though flakes of chicken-fat fibrin were clinging to the interventricular net-work. When the pulmonary artery was freely opened, a firm chicken-fat clot was found upon the cardiac side of the indentation previously mentioned. I have no doubt but that the sudden closure of the blood-channels by this means was the cause of the gasping breathing and the convulsions from cerebral anæmia. The case is an exceedingly interesting one, showing an unusual complication in acute pneumonia in a strumous child. There is no reason to believe the pneumonia to have been secondary to infarction."

OBSTETRICAL SOCIETY OF PHILADELPHIA.

STATED MEETING, THURSDAY, JUNE 7, 1883.

The President, R. A. CLEEMANN, M.D., in the chair.

DR. FRED. C. SHEPPARD exhibited the uterus and appendages removed post mortem from a case of

INTERSTITIAL OR TUBO-UTERINE FŒTATION,

and read the following report:

Through the courtesy of Dr. George S. Hull, of Chambersburg, Pennsylvania, I am enabled to present, this evening, the post-mortem specimens of one of the rarer forms of extra-uterine pregnancy. The history of the case is given in such a clear and complete form by Dr. Hull that I will read it in his own words. "(April 11, 1883.) A few days ago it fell to my lot, as coroner, to hold an inquest on a colored woman who had died suddenly. Vomiting followed by death, together with a history of family troubles, led her friends to suspect her husband of poisoning her.

"About three A.M., pains had set in in the left inguinal region, accompanied by severe vomiting: I could not learn whether the pain preceded the vomiting or *vice versa*. A physician was sent for; he did not go, but sent three one-quarter grain morphia powders. She took one every hour, seemed easier, and the vomiting ceased. At noon becoming very weak, the doctor was again sent for, responded in person, and found the patient pulseless at the radials. He ascertained that she had been constipated for about a week, and made a diagnosis of obstruction of the bowels; he gave five compound cathartic pills, and ordered an enema. In an hour the patient was dead.

"*Autopsy.*—Peritoneum inflamed (recent—no pus); stomach empty, save the pills, which were liquefied; intestines normal. About two quarts of clotted blood were found in the ab-

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dominal cavity. The womb was ruptured, a small, circular rent in the fundus about the left cornu.

"The uterus was removed, and the rent enlarged; a fœtus of about three months, with membranes entire, was found. The placenta seemed attached at the point of rupture.

"The pregnancy seemed to be interstitial, the tube being involved. The lower half or two-thirds of the uterus was much hypertrophied, and contained two or three teaspoonfuls of muco-pus, which could be pressed out at the os uteri. There was no communication between the pus-cavity and the cavity containing the fœtus. The uterus was not adherent to the other organs."

(A sketch by Dr. Hull shows the uterus inclined to the right side, the fœtal sac occupying very nearly the normal position of the fundus, and the point of rupture a little to the left of the line of the umbilicus.)

"It occurred to my mind that the rupture was spontaneous, causing the vomiting and pain of the night: however, the woman had eaten of sauer-kraut for supper, and it might have caused the vomiting, and that in turn the rupture. The morphia allayed the symptoms for a time, but the hemorrhage was slowly going on, and, peritonitis setting in, the former predominating, death took place from loss of blood. She was the mother of one child, and was to all appearances in good health up to the time of the accident."

An examination of this very interesting specimen shows an enlarged womb, with a dilated cavity, the walls of which are hypertrophied to a thickness of seven-eighths of an inch; lining this cavity is a structure which appears to be a true uterine decidua; the os is small, with an irregular stellate outline, and is perfectly patulous; the cervix is partially absorbed. The right ovary is small and flattened; the left of about normal size; at the point of entrance of the left Fallopian tube is a large intramural cavity, which contained the fœtus; the outer wall of this cavity is exceedingly thinned, and presents ragged edges at the point where rupture took place; to the inner wall are attached some remnants of the placenta; no communication can be detected between the fœtal cyst and the uterine cavity. The fœtus is apparently of from three to four months, and is presented with the membranes unbroken.

To cases of this class the terms interstitial, tubo-uterine, utero-interstitial, and parietal have been applied. Dr. Parry, in his work on "Extra-Uterine Pregnancy," classifies them under the head of "tubo-uterine, or those in which the germ is arrested in that portion of the tube which passes through the uterus." They are very rare. An analysis by Hecker (quoted by Parry) shows twenty-six cases out of two hundred and twenty-two, and Parry in his analysis of five hundred cases of extra-uterine pregnancy finds but thirty-one of the tubo-uterine variety; but two hundred and thirty of his cases are grouped under the general head of doubtful. Mr. Alban Doran (*Obstet. Trans.*, vol. xxiv., 1882, p. 234) has been able to find but six specimens in all London, though he states that "we see a goodly array of the more frequent tubal form in almost every museum." I will not occupy your time this evening by referring to the question of pathology or of diagnosis, as both points cover the entire ground of extra-uterine pregnancy, and will be discussed in a future paper.

The proper treatment to adopt in these cases is, however, a point of great interest, and merits notice. A ruptured extra-uterine fœtal cyst may cause death instantaneously, as in the case of the English actress mentioned by Dr. Chabazian (*Obstet. Trans.*, 1882, p. 157): "She was taking an ice in the Bois de Boulogne, she fell down suddenly, and she was dead." Poisoning being suspected, an autopsy was performed. No trace of poison was detected, but the ruptured pouch of an extra-uterine fœtation showed the cause of death. In this case, of course, there was no time for surgical interference; but in many, as in the one reported this evening, an appreciable interval elapses between the first symptoms and the fatal issue. The diagnosis being made, what would be the proper course to pursue? Unquestionably, laparotomy. An exploratory incision would at once reveal the true condition of affairs, and the surgeon could either incise the cyst, turn out the contents, ligate the bleeding points, suture the edges to those of the abdominal wound, and establish drainage; or, if thought better, remove entire the uterus and its appendages. Either plan would offer a very fair prospect of recovery, while if left without surgical aid the patient would be doomed inevitably to death.

A number of points of interest present themselves in the study of this interesting case, but the limits of a paper of this character forbid us taking them up. I might merely call your attention to the large quantity of blood—Dr. Hull states, about two quarts—exuded from a comparatively trifling rent. This fact has been repeatedly commented upon by other observers. Dr. Parry states that some of the most severe hemorrhages occur when the orifices are very small, and cites a number of instances in which from several pounds to two and a half gallons of blood have been found in the abdominal cavity after rupture of extra-uterine cysts.

In conclusion, let me recall to your mind Dr. Hodge's case. His patient went to the eighth month, labor was brought on by dilating the os uteri, and the child delivered by rupturing the septum between the uterine cavity and the fœtal sac; the child was delivered by the natural passages. The child lived two hours, and the mother made a complete recovery.

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Dr. B. F. BAER had examined the specimens, and felt a doubt of its having been of the usual form of uterine tubo-gestation. That form is the rarest, and is considered the least dangerous because not so liable to rupture, in consequence of having the muscular tissue of the uterine wall to strengthen it. In Dr. Hodge's case, the septum of uterine tissue between the uterine cavity and the fœtal sac was so thin that it could be scratched through with the finger. As the case reported by Dr. Sheppard terminated by rupture about the third or fourth month, it resembles a tubal in that particular. The question of operative interference is very interesting. In this case, as ten hours elapsed between the accident and death, an operation would be justifiable if the diagnosis could have been established.

Dr. ALFRED WHELEN remarked that Miss Neilson lived ten hours after the first shock of her illness, and the published report of the autopsy stated the cause of her death to have been rupture of varicose ovarian veins.

Dr. SHEPPARD, in closing the discussion, remarked that Dr. Parry classes all of this type of cases as tubo-uterine. The sac in this case was undoubtedly in the uterine wall, as the specimen shows. He had not been able to pass a bristle from the uterus into the Fallopian tube. As regards the possibility of the spontaneous stopping of the hemorrhage as a reason for postponing the operation, he would not consider it advisable to wait, for even when the laceration is very small, as in this case, the hemorrhage may, and probably will, be excessive; this hemorrhage is the cause of death in most, if not all, of the cases, and the only chance for the patient is in stopping the hemorrhage and removing the already effused blood. If the diagnosis can be made, laparotomy is justifiable, and would be the only resort. In the report by the French physician to the Obstetrical Society, no name is given: the patient is simply mentioned as an English actress.

KNOTTED UMBILICAL CORD.

Dr. CLEEMAN exhibited for Dr. John A. Hunter an umbilical cord tied into a complete single knot. There was no difference in size of any portion of the cord, and there had been no interference with the nutrition of the fœtus. Dr. Hunter had not been present at the birth of the child, but had come in soon afterwards, and in tying the cord and removing the placenta he noticed the knot. In a case reported by Dr. William F. Jenks to this Society, a failure of the fœtal heart was noticed by auscultation, the child died in utero, and the knot in the cord was suggested as a probable cause of the death of the fœtus. Such a knot as is seen in Dr. Hunter's case might be formed during parturition if a loop of the cord was around the child's neck and it was loosened and the body allowed to pass through it in the process of extraction.

Dr. MONTGOMERY thought that such a knot, if existing in utero, might develop a murmur that could be discovered by auscultation.

ACUTE HYDRAMNIOS.

Dr. E. E. MONTGOMERY remarked that although dropsy of the amnion is a quite frequent condition, that above-named is exceedingly rare. For this reason he has felt that the following case was worthy of record. June 4, 1883, he saw Mrs. P., in consultation with Dr. Chase. She was pregnant for the fourth time. In the one preceding this she had miscarried. Her last menstruation occurred December 10, 1882. In her former pregnancies she had been quite small, carrying the fœtus low down. This time the abdomen was larger than formerly at the same period, but she continued without any special discomfort until one week ago, when, without any assignable cause, the abdomen began rapidly to increase in size, and continued to do so. The increase has been attended by pain, tenderness, difficulty in breathing, entire loss of sleep for three days, loss of appetite, and scanty flow of urine. She has been obliged to maintain a sitting posture, as lying down greatly increased the difficulty of breathing. They examined the urine, but found it free from albumen. The abdomen was distended more than we would expect to find it at full term. The tumor projected well forward and upward, and a little more prominent to the right. It was perfectly regular in outline. The skin of the abdomen was smooth, tense, and glistening, and could not be pinched up over the tumor. It was quite tender to pressure. Short-waved fluctuation was distinct over the whole surface; percussion was dull; a slight tympanic resonance could be determined in both inguinal regions. No part of the fœtus could be distinguished by abdominal palpation. In fact, all the external signs were those of an ovarian tumor. They imagined they heard the heart-sounds, but so indistinctly as to be uncertain. She said she had felt the fœtal movement for several days very slightly. Per vaginam the cervix was found dilated, the os open so as to admit two fingers to enter it. The vertex of a fœtus was felt presenting, and, singularly, was but slightly movable.

Considering the rapid enlargement in a few days, the extreme discomfort of the woman, as well as the imperilled circulation and the extreme improbability of the woman or fœtus surviving until the latter had reached a viable age, they concluded the best course was to induce premature labor, and, from the urgent need of relief, to cause it by rupturing the membranes. This he did, and on the evening of the same day a still-born fœtus was extracted. The upper part of the abdomen still continued almost as large as before. Examination per vaginam revealed the membranes of a second child. The rupture of these was

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followed by a gush and discharge of an enormous quantity of water. The second fœtus and the placenta were soon extracted. The latter was single, with two cords. One cord appeared to have only a membranous attachment, but closer examination showed that it had been torn off from the base of the other cord. The quantity of liquor amnii was so great that it soaked through folded quilts, mattress, floor, and ceiling, and dripped upon the floor of the room below. The uterus contracted firmly, and the patient was at once relieved. The children were both males, and well developed for the sixth month; the second child lived a few minutes.

The fixed position of a fœtus in the os in these cases has been given by McClintock as a sure indication of a plural pregnancy; but I must confess that this did not occur to me at the time, though I was unable to account for the anomaly. The existence of a single placenta in twin pregnancies is said always to be accompanied by children of like sex. This theory is here confirmed as far as is possible by one case. As to the cause of the condition authorities greatly differ. Gervis, in *St. Thomas's Hospital Reports*, brings the causes under three heads: 1st. Cases due to inflammatory conditions of the amnion. 2d. Cases where the decidua has been found diseased and hypertrophied, but the amnion healthy. This will cause effusion into the amnion by transudation owing to disturbed circulation. In these cases the fœtus suffers and may atrophy. 3d. It may arise from some maternal blood dyscrasia of uncertain nature, but evidencing itself by the same condition recurring in successive pregnancies in the same patient. Puerperal albuminuria may be the cause, and comes under this head. Simpson says disease of the placenta is likely to recur in the same individual. Savage asserts that an œdematous condition of the placenta is present in all cases of hydramnios. McClintock found a morbid condition of the placenta in every case. Mercier always attributed it to inflammation of the amnion. Others have ascribed it to obstruction of the fœtal portal circulation, or in the cord giving rise to transudation into the sac from the surface of the cord. Hydramnios greatly endangers the life of the fœtus. Of forty-three cases collected by McClintock, in which children were born where this condition existed, twenty were still-born, sixteen of these had ceased to live for some days or weeks before labor, eleven of those born living died in a few days. Of thirty-three cases, four mothers died, showing a high maternal mortality.

In this patient the success of the treatment was greater than expected. As the distention had been so rapid, they feared loss of power in the walls of the uterus, and a consequent long first stage and liability to hemorrhage. It becomes an important question to decide whether they were justified in undertaking so promptly the induction of premature labor; but they felt that the probability of the death of the fœtus and the danger to the mother certainly in this case justified the procedure.

Dr. B. F. BAER read the following

SUPPLEMENT TO THE PAPER ON THE EFFECT OF THE OPERATION FOR THE RESTORATION OF THE LACERATED CERVIX UTERI ON FERTILITY, CONFIRMATORY OF THE VIEWS THERE ADVANCED.

He had expressed the conviction, based upon his own experience, that sterility did not follow as a result of the operation, as had been asserted, but because the pathological conditions which almost constantly exist with the laceration were frequently not relieved, and this applied especially to the old cases. He there made this statement: "The longer the time which has elapsed between the occurrence of the injury and its repair (pregnancy being absent during this time), the greater and more permanent will be the changes in and about the uterus, which almost necessarily result in a continuance of the sterility after the cervix has been restored;" and he also said that if five years or more had expired between the occurrence of the injury and its repair, sterility would be likely to remain. In support of this he reported twenty-seven cases, of which number thirteen had been sterile from six to sixteen years. Of this number not one has become pregnant since the operation; but of the eight cases in which pregnancy had occurred within two to five years previous to the operation, he reported four that had become pregnant, and he now adds two more.

Case V.—Mrs. X., aged 32 years, mother of three children, youngest three years of age, complained of severe metrorrhagia every three weeks, and profuse leucorrhœa in the intervals, together with a dull aching pain in the lumbar region and pelvis and a sharp spasmodic pain in the bladder, which caused an almost constant desire to micturate. She had lost weight, was anæmic and nervous, and had so many obscure aches and pains that the doctor took refuge in writing the words "general hyperæsthesia from nervous exhaustion." Physical examination showed the perineum to be lacerated to the external sphincter ani muscle, but not through it. The cervix uteri was torn bilaterally to the vaginal attachment, but not much hypertrophied. The body of the uterus was only slightly enlarged, but its cavity was relaxed and granular. On January 30, 1881, after four weeks' preparatory treatment, he operated on the cervix and secured a good result. He was made anxious on the second day after the operation by a rise of the temperature to 102°, which, however, subsided to the normal by the next day. This rise he ascribed to the use of the curette just before operating, which he now thinks ought not to have been done. This is the only instance in which he has observed a perceptible

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increase of temperature after this operation. This patient objected so strongly to the use of the catheter that he allowed her to pass her urine spontaneously. Since union was perfect here, he allowed his next patient to do the same, with a like good result, and this has been his custom ever since. It was his purpose to restore the perineum, but she was so much benefited that she refused to permit it, and returned to her home in Michigan. A communication received a few weeks since informed him that she was spontaneously delivered at term, six months ago.

Case VI.—Mrs. M. had three children at term and one miscarriage, the latter two years previous to February, 1878, at which time she first consulted him. She complained of a dragging pain in the back from the sacrum to the nape of the neck, with menorrhagia and leucorrhœa. The neck and body of the uterus were hypertrophied, soft, and tender, and the former was badly torn on both sides; the mucous membrane was everted and abraded; sound entered four inches. February 17, 1880, he operated for the lacerated cervix; union was immediate. In his case-book, October 25, 1881: "This patient has been in excellent health since the operation; whereas I had pursued the ordinary local treatment at intervals during two years before it, with only temporary improvement." She is now in the fifth month of gestation. This makes seventy-five per cent. of pregnancies following the operation of the eight cases of this class.

W. H. H. GITHENS, *Secretary.*

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

Case of extreme mitral stenosis, death resulting in a few months from sequential lesions without general dropsy. Presented by Dr. J. T. ESKRIDGE.

CHARLIE ——, æt. 15 years, died in St. Mary's Hospital during the latter part of December, 1882. In February of that year, during my term of service, he first came to the hospital, suffering from acute bronchitis. The attack ran its course in a week or two, but the heart, during and after the seizure, was exceedingly irritable, beating from one hundred and twenty to one hundred and fifty times per minute. Frequently he complained of pain over the præcordial region. The heart was repeatedly and carefully examined, but no endocardial murmur or pericardial friction-sound was heard. No thrill or friction fremitus was felt. He was kept in the recumbent posture, and counter-irritants were applied to the præcordial region. At the end of two weeks he left the hospital, feeling tolerably well, although the cardiac pulsations were rarely below one hundred per minute, and a little exercise or excitement of any kind would increase them to one hundred and twenty or more.

In August, 1882, he re-entered the hospital, and was again suffering from acute bronchitis, with free secretion, attended by numerous subcrepitant and large moist bronchial râles. After the subsidence of the attack, which took place in about a week, a decidedly rough and rather long presystolic murmur was heard. During the remainder of his life he stayed in the hospital, and was engaged most of the time in waiting upon the sick in the ward. Ascending and descending stairs, and active exercise of any kind, greatly exhausted him, causing the heart to beat tumultuously and him to pant for breath. He rapidly grew worse, and by the latter part of November he was spitting quantities of blood rather frequently. The lungs soon became so engorged that the frequent hæmoptysis did not relieve them. During most of December he remained in bed, propped up by pillows. The last two weeks of his life he was air-hungry and gasped for breath. His extremities were cool and cyanosed, his face was of a dusky hue, and he expectorated large quantities of blood and frothy mucus. No general dropsy existed. Considerable albumen was found in the urine. Physical signs of pulmonary congestion and œdema, bronchitis, pleurisy with effusion, pleuro-pericarditis, and pericarditis with effusion into the pericardium, were present during the last few weeks of his life.

Sectio cadaveris.—Numerous recent and old pleuritic adhesions were found, especially in the neighborhood of the heart. Pleuræ were slightly adherent to the upper portion of the pericardium by means of recent exudate. Considerable fluid, containing only a trace of lymph and no pus, was seen in the pleural sacs. The pericardium contained several ounces of nearly clear serum. Several patches of recently-exuded lymph were present on the outer surfaces of the ventricles. The weight and size of the heart were greatly increased. The right cavities of the heart were relaxed and filled with dark fluid blood and a chicken-fat clot. The left side of the heart was less relaxed, and contained a small quantity of blood. The wall of the right ventricle is nearly twice its usual thickness; its cavity is slightly enlarged. The right auricle is dilated. The valvular curtains at the pulmonary orifice appear competent and show no inflammatory deposits. Tricuspid valve slightly incompetent, otherwise normal. The left auricle with its appendix is enormously dilated. The left ventricle is concentrically hypertrophied. The aortic-valve curtains are somewhat thickened, but they are competent and do not encroach upon the orifice. The mitral curtains are adherent to each other along their entire right borders, and along the external portion of their left free margins, thus leaving a space only four millimetres long by two wide for the blood to pass through. The valve has

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a leathery feel, but neither it nor the surface of the auricle is rough. The mitral valve does not present the funnel-shaped appearance usually seen in such cases, because probably the curtains had adhered to each other irregularly and left the small opening to one side of the centre of the normal orifice. The lungs were dark, deeply congested, and more or less œdematous. Several ounces of clear serum were found in the peritoneal cavity. Liver, spleen, and kidneys dark and congested.

One point in the clinical history of this case is worthy of special attention. The first symptoms, directing attention to cardiac disease, were the rapid pulse and exceedingly irritable condition of the heart. These symptoms existed for several weeks, and probably for a few months, before a murmur was audible. An explanation of these, without the presence of a murmur, will be found by a careful study of the diseased mitral valve before us. Neither the valve nor the surface of the auricle is roughened; consequently, for the production of a presystolic murmur under such conditions it is necessary for the blood-current to meet with sufficient resistance in its passage from the auricle into the ventricle to enable it to set up decided vibration in the valve itself. Before sufficient mechanical obstruction took place at this orifice, the parts being comparatively smooth, to develop a murmur, inflammation and beginning adhesions of the curtains to each other were taking place. The latter condition, although not sufficient to give rise to a murmur, rendered the heart irritable. If the explanation given be the correct one, it points to the significance of some irritable hearts where no murmur is present to announce cardiac valvular disease. The length of the murmur was greater than that of any mitral presystolic murmur that I had heard before. It seemed to be divided into two parts, both occurring between the diastole and systole of the heart. The first part was the softer and had less intensity; the latter was very rough, and ended abruptly. They corresponded to what Hayden has described as the post-diastolic and presystolic murmurs. He says they always denote great obstruction at the auriculo-ventricular orifice. The post-diastolic murmur, he thinks, is due to the passive flow of blood from the auricle into the ventricle, the presystolic taking place when the auricle contracts. If subsequent autopsies should almost constantly associate the prolonged or double presystolic murmur with great stenosis at the mitral orifice, it will be of value in prognosis, as life cannot long continue when stenosis is as great as seen in the heart exhibited to-night.

Thoracic aneurism. Presented by Dr. F. P. HENRY.

Dr. F. P. HENRY exhibited a specimen of intra-thoracic aneurism, markedly sacculated, and involving the arch and descending portion of the aorta as far downward as the lower border of the sixth rib. The following notes were taken by Dr. Howard Kelly, the then resident physician, soon after the patient's admission to the Episcopal Hospital.

December 7, 1882.—There is a "distinctly elevated area about two inches in diameter to left of manubrium, occupying the first and second intercostal spaces and projecting the cartilage of the second rib. This is also the seat of greatest dulness and of strong bruit and expansile movement. Murmurs heard at apex, ensiform cartilage, and second right costal cartilage. Aortic sounds weak and muffled. Pulse in right radial and axillary strong; in left radial and axillary weak and distinctly delayed. Brachials at elbow visible, sinuous, and atheromatous. Faint bruit in left axillary, none in right. Strong bruit in left carotid, faint in right. Some relation between subclavian arteries. Faint bruit in abdominal aorta. Left pupil always smaller than right."

Under the use of large doses of potassium iodide there was a decided subsidence of the external tumor, also of the pulsation and bruit. The most troublesome symptom, dyspnœa, was not, however, materially benefited.

Death occurred on May 13 through rupture into the right bronchus, and was immediate.

The removal of the aneurism was rendered difficult by the adhesions to neighboring tissues, especially to the sternum and ribs in front. The fifth and sixth dorsal vertebræ were deeply eroded, and at the site of these erosions the aneurismal wall was entirely gone, its place being supplied by two masses of fibrin accurately fitting into the erosions, but unconnected organically with the sac. They merely acted as plugs. The heart was in an advanced state of fatty degeneration and slightly enlarged. The aortic valves were perfectly healthy, but immediately above them were marked atheromatous changes. The opening into the right bronchus was about the size of a three-cent piece.

Acute phosphorus-poisoning. Specimens presented by Dr. F. P. HENRY.

Dr. HENRY also presented specimens from a case of acute phosphorus-poisoning, consisting of stomach, liver, kidneys, heart, and spleen. The phosphorus was taken with suicidal intent during the night of May 7, and was obtained by soaking the heads of a box of matches in water. Fifteen minutes after swallowing the solution, the patient, a male German, æt. 22, experienced a burning sensation in the stomach, which in the course of a few hours (about six) steadily increased until the pain became excruciating. Copious and repeated attacks of vomiting then ensued, and followed every attempt to allay thirst, which was excessive. On the 8th there was a very

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loose discharge from the bowels. The patient was admitted to the hospital on the 10th. His skin was sallow and dark, but not then icteric in hue. There was tenderness over the liver, and the line of liver-dulness was slightly increased. Severe pain in the abdomen was complained of, and this pain had continued, with occasional intermissions, since the 8th. The pulse was full and strong, 84 per minute; the temperature was 100°; the urine contained considerable albumen, but no casts or other abnormal ingredient. I extract the following from notes taken by the resident physician, Dr. James S. Carpenter:

May 11.—No pain; pulse 100; temperature 98⅘°. Patient refuses food, but craves acid drinks.

May 12.—Vomited once, but phosphorus not tasted by the patient as heretofore. Pulse 108, and weaker; temperature, which was 101° on the evening of the 11th, now 98⅘°; decided icterus; thirst continues.

May 13.—Jaundice increased; tongue dry and brown, red at edges; abdominal wall covered with numerous petechial spots; pulse 126; temperature 100°.

May 14.—Intense jaundice; one clay-colored stool; pulse very weak, 32; temperature 98½°; extremities cold; bladder relieved by catheter; forty-eight ounces removed. The urine contained bile-pigment in large amount, and had a strong odor of phosphorus. The man died at 11.40 A.M., one week, less fourteen hours, after taking the poison. As the patient was not admitted until the third day after he had swallowed the phosphorus, treatment was directed towards relieving pain and maintaining the strength as far as possible.

At the autopsy, which was made very soon after death, the stomach was found filled with a grumous, bloody fluid, but the gastric mucous membrane was quite pale and free from erosion or any sign of inflammation. The folds of mucous membrane upon its surface were, however, unusually prominent. The liver weighed three pounds fourteen ounces. The anterior border of the right lobe and the parts adjacent to the gall-bladder were yellow-mottled. Streaks of this yellow coloration extended along the borders of the fissures on the under surface. In parts these streaks were an inch in width. The bulk of the liver was normal in appearance. The gall-bladder was empty. Heart rigid in systole; its valves healthy; slight pericardial effusions.

Lungs.—Some old pleuritic adhesions and emphysematous vesicles at both apices.

Spleen and kidneys apparently healthy. Blood fluid.

A microscopical examination of the liver will be made and reported upon at a future meeting.

Carcinoma (scirrhus) of the breast. Presented by Dr. J. H. MUSSER for Dr. R. M. GIRVIN.

In November, 1882, Miss ——, a lady of good circumstances, with an hereditary tendency to carcinoma and scrofulosis from the mother, noticed at the upper portion of her breast a small, extremely tender lump, the size of a hickory-nut. The nodule increased in size, and on the day of removal, February 17, 1883, was as large as a duck's egg in the position first mentioned. Neither at that time nor at any other time was the nipple either diseased or retracted or the mamma discolored. The breast had never been injured. The lymphatics were not involved. The general health and nutrition were good.

The operation was performed on the above date by Dr. Girvin, on account of severe paroxysmal pain. So severe was this symptom that a slight opium habit developed. The wound healed nicely. There has been no return of the disease (May 20).

Examination of a section of the hard mass in the gland demonstrated it to be a scirrhus.

Carcinoma (scirrhus) of the rectum. Presented by Dr. J. H. MUSSER.

At the autopsy of the person from whom these specimens were removed, made thirty-six hours after death by Dr. W. E. Hughes, he found rigor mortis well marked, the body greatly emaciated, the skin of a yellow earth-color, and on the right buttock, near the gluteal fold, the ragged, grayish openings of several sinuses, which, it was subsequently found, communicated with a sac behind the rectum. This sac opened into the rectum, which at that point was greatly dilated. At the bottom of the dilated pouch in the posterior wall, towards the anus and two and a half inches therefrom, was a hard mass. This mass was the size of a silver dollar, involved two-thirds of the wall, but did not cause occlusion of the gut. The surface was ulcerated. The bowel towards the cæcum was dilated, the mucous membrane congested, and the muscular coat hypertrophied. The remainder of the intestine was normal, and the glands of the mesentery were only slightly enlarged. The liver weighed four and one-half pounds, was very fatty, and in the left lobe a secondary mass larger than a walnut was found. The apex of the left lung was the seat of a small area of catarrhal pneumonia; the base was bound down by rather recent adhesions. Further than this, the tissues presented no other change than that due to wasting disease. Microscopical examination revealed the two nodules to be of the nature of a hard cancer.

The patient, a female, 37 years old, had always been a dyspeptic and of a constipated habit. Her mother and one sister had died of cancer of the stomach, her maternal uncle of the same disease of the liver. I attended Mrs. —— from October 11, 1881, to February 7, 1882. She died in May of the latter year. From the 5th of August previous to my first visit she had been suffering from so-called dysentery, twenty to thirty bloody and mu-

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cous stools, with tormina and tenesmus. She had grown very feeble and lost much flesh. My notes state abdomen flat, tender all over, especially in the fossæ, but no tumor noticeable. Dysenteric diarrhœa continued, and I may say these discharges kept up during my attendance, at times better, again worse. The mucus was always present; the blood, at times none, again slight, or again in large amounts. The appetite was poor, and her dyspepsia bad. The debility and emaciation progressed, and the appetite became less. In November I detected a hard tumor, with apparently a raw surface, two inches and a half from the anus.

Subsequently she complained of pains in the legs, and of severe cramps at night. In January she began to complain of pain in the right hip posteriorly. Local and internal remedies scarcely relieved it, and finally the post-rectal abscess discharged. Death from exhaustion ended the career of horrible suffering.

I would remark that in all probability the obstinate constipation predisposed to the location of the disease. The constant irritation of the hardened fæces would tend to the deposition of the cancerous growth in this locality in a person predisposed to that disease. I have not seen constipation noted as a factor in the etiology of rectal carcinoma, but I think such a view plausible, and that we may infer the practical point,—soluble bowels in the cancerous-inclined.

Sarcoma of the bladder. Specimens presented by Dr. J. H. MUSSER for Dr. S. R. SKILLERN.

I am indebted to my friend Dr. Samuel R. Skillern, for whom I made the autopsy, for the privilege of exhibiting this very interesting specimen. At the time of the examination the skin of the body was of the characteristic cachectic hue, the rigor mortis was marked, the emaciation considerable, though not striking, for on section there was a fair amount of fat in the abdominal walls and in the omentum, while the muscles were comparatively large. The abdominal cavity alone was examined. The peritoneum was healthy, the stomach and intestines of a normal appearance. Neither the mesenteric nor any other lymphatic glands were affected. The liver was slightly enlarged, and fatty; the spleen normal. The genito-urinary tract was removed intact, the kidneys being severed from their attachments with difficulty on account of being surrounded by fat. Beginning with the kidneys, the left was about half the natural size, with thickened adherent capsules. The pelvis was very greatly dilated, the secreting portion reduced to one-third the natural size. The medullary portion was mostly atrophied; the cortical was thin, hard, and pale. The right kidney was larger by one-third than normal, was also cirrhotic, and, although its pelvis was dilated, the secreting portion was not atrophied very much. The ureters were very much dilated, averaging the size of the index finger. The bladder was in its normal position, and, on opening, the calibre was found lessened by one-half; the walls much hypertrophied. At the base of the bladder, in the trigone vesicale, a flat tumor was detected. It measured two inches transversely, and one antero-posteriorly. The base of the tumor was smaller than the upper surface. This surface was irregular; at some places ulcerated, at others covered with phosphatic concretions. The orifices of the ureters were found by hydrostatic means to open into the tumor, and hence were somewhat occluded. The urethral canal was not encroached upon. To the left of the large tumor were two small secondary masses. Microscopical examination of the kidneys and the tumor was made, and interstitial and tubular nephritis was found. The tumor was of the histological appearance of a sarcoma. The sections are under the microscope for examination.

The person from whom these specimens were removed had been a successful minister in charge of a large congregation. He had always been a great mental worker. At the time of his death he was fifty years old. During his life his habits were most exemplary; his previous health was good; in his family history no evidence of hereditary disease could be traced. For the clinical history I am indebted to the various medical gentlemen that attended him.

Prof. Agnew was consulted more than two years prior to death, on account of vesical irritation. Six months thereafter he passed blood by the urethra. Careful examination at this time and before, both by the urethra and rectum, failed to detect any tumor or calculus. In a short time the cachectic hue became evident, and, with all, the consultant suspected malignant disease. The hemorrhages became more profuse and occurred more frequently. Prof. Tyson was then consulted. He very kindly allows me to extract the following from his notes:

Dr. Tyson said that Mr. S. first came under his observation May 27, 1880, being then 47 years old. He stated that he had been annoyed by frequent micturition for about five years, which gradually increased until at that time he had to rise two or three times each night, but thought it was more frequent during the day than at night. At first he was completely relieved of this symptom during his vacation which he spent in the woods, and was still much better at such times. He thought Poland water gave him relief, and he felt compelled to use it constantly. There was at this time a burning sensation at the neck of the bladder. The urine at this date contained one-half its bulk of albumen, enough blood-corpuscles to give it a smoky

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hue, but no casts. On June 22 he again reported, Prof. Agnew in the mean time having passed a sound and detected a slight stricture, which he thought accounted for the symptoms. The patient was instructed to pass a sound for himself, and he thought it gave him great relief, not only diminishing greatly the desire to pass water, but also relieving the sensation at the neck of the bladder.

Dr. Tyson did not see him again until October 31, 1881, when he reported that during the previous year he had been using the bougie, at one time as often as five or six times a week, but more frequently every three or four days. He had been very well during this time, gaining ten pounds in his summer vacation, and at that time not urinating more frequently than any one else, although he kept up the use of Poland water, of which he was using eight tumblers a day for five weeks, while at the spring, and when at home five a day. He now mentioned that during the summer he felt an occasional soreness in the region of the bladder when stooping, and noticed also occasional chalky deposits in his urine. At the time of this visit his urine was acid (specific gravity 1.014), and contained one-fifth its bulk of albumen, but no tube-casts. No note of blood was then made.

On November 7 his urine contained a sediment equal to about one-tenth to one-twelfth its bulk, which was composed mainly of blood-corpuscles. There were a few leucocytes. He continued to visit Dr. Tyson until March 28, 1882. During much of this time he reported himself improved, there being much less frequent micturition at times, while the uncomfortable sensation at the neck of the bladder was less. The Poland water was discontinued and ordinary drinking-water substituted, with about the same effect in relieving the symptoms. During most of this time he took oil of eucalyptus in doses of from six to ten drops three times a day, we thought at the time with good effect. But the same changes occurred when he was taking nothing. His urine was always albuminous, sometimes containing blood appreciable to the naked eye. Once or twice he passed a small clot of blood from the bladder, and on January 7, 1882, a larger clot, which he compared to a small leech. Two or three times he brought chalky concretions, evidently phosphates, which he had passed. He always thought the bougie relieved him. He was always worse after a hard day's work, as on a Monday after preaching a couple of times Sunday. Benzoic acid and ergot were used with about the same effect. The oil of eucalyptus apparently temporary, but no permanent advantage.

On March 28 he reported for the last time, and said that since his previous visit, seven weeks before, he had been very ill with what seemed to be an attack of great prostration, during which the urine was little altered, except that there was increased phosphatic sediment. More recently, however, there seemed to be always, except for short intervals, more or less blood in the urine. At no time during his appearance did he present a cachectic appearance or any other symptoms, except those mentioned of intermittent hemorrhage from the bladder and symptoms of vesical irritation, and had not suspected malignant disease of the bladder while he was under his observation, but thought rather there might be a hemorrhoidal condition of the prostatic plexus of vessels.

During the summer and fall of 1882 the general health of S. failed very much, while the vesical irritation was quite pronounced. When under Prof. Agnew's care he began to use a sound, and at this time used it daily for its soothing effect. Along with the slight vesical tenesmus he suffered from a little pain at the head of the penis from the very first. During this time, and in the winter, the hemorrhages continued. The blood was discharged before the urine, sometimes a considerable amount of pure blood, fluid or in clots. The bloody discharges occurred with every urination, or days would pass by with clear discharges.

Dr. Skillern attended S. from January 9, 1883, until his death in March. From his notes, in addition to the above, I glean the following facts. The occasion of the first visit to the patient was due to a fit which he had, and the nature of which was not clear, although it was probably a syncopal attack from blood-loss. He suddenly became unconscious, and when seen had a pallid face, cold, clammy extremities, a feeble pulse, and shallow respirations. There had been no convulsion, although slight convulsive movements were noticeable. Hypodermic injections of amyl nitrite soon aroused him, although he dozed for an hour afterwards. There is no evidence to prove that the seizure was uræmic. At this time his general condition was very bad. During January it is noted that he used the catheter frequently, on account of a slight difficulty to start the flow of urine, and that in using it a grating sensation was felt by him; that the paroxysmal hemorrhages continued; that the constant feeling of discomfort at the neck of the bladder and the dysuria grew worse. Micturition occurred every two hours. In addition to the above, in February he had morning nausea and vomiting,—generally losing his early meal,—becoming more frequent later in the month. The loss of flesh and strength became very evident, as did the cachectic appearance. Two weeks prior to death he began to complain of renal pain. The twenty-four hours prior to death the pains were agonizing. He died of exhaustion. It may be noted that the urine was never suppressed, nor was there ever marked vesical pain.

Dr. FORMAD had expressed the opini-

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from an examination of the urine several weeks before death, that malignant disease of the bladder was present, confirming the opinion of the other gentlemen. His opinion was based on the character of the epithelium in the deposit being of the appearance of the deep layers of the bladder mucous membrane.

Dr. AGNEW kindly informs me, without referring to his notes, that he distinctly recalls four cases of sarcoma of the bladder, all in males, and in all bloody urine was an early and constantly-recurring symptom, amounting in one of the cases to very profuse hemorrhages. Pain in one or both hips was also an early symptom. The patients were all over forty years of age.

This interesting note calls attention to the chief fact of these cases, and an especially noteworthy one,—the age of the patient. As is well known, sarcoma in other situations generally occurs in early life; this in later life. Then an examination of the relation of the mouth of the urethra to the flat tumor will show how readily a sound could have passed over the tumor, while, the base of the bladder being filled, the sound could not engage the mass. The enlarged prostate was no doubt deceptive, obscuring the basal mass when rectal touch was made.

REVIEWS AND BOOK NOTICES.

A TREATISE ON INSANITY IN ITS MEDICAL RELATIONS. By WILLIAM A. HAMMOND, M.D. New York, D. Appleton & Co., 1883.

This very entertaining book is based, according to the statement of its author in the preface, upon the idea, "Hence it follows that from a medical stand-point there is no middle ground between sanity and insanity. The line of demarcation is sharply drawn, and it is but a step from one territory to the other," and to our reading shows very clearly that in making such assertion its author reasons as illogically, and asserts as dogmatically that which is scientifically not correct, as he does when, in the latter part of the book, he cleaves still to the now almost mediæval fancy that the bromides act simply upon the brain by contracting their vessels, or makes the bold assertion of morphia that, "as a small dose produces cerebral hyperæmia, a moderate dose causes cerebral anæmia." Of course it is not to be expected that the author of such a book as this—a gentleman of such high professional standing as its author—should re-study the therapeutics of his youth, and thereby become acquainted with the modern methods of healing disease; but why cannot there be more modesty of assertion? Let us be spared that which every well-instructed student knows is mere puerile imaginings.

Hysterical mania is distinctly recognized by Dr. Hammond. Every medical man knows that there exists every possible grade of case, from the lady only slightly hysterical at times to the most violent hysterical maniac: where is the line to be drawn in their cases? Take, again, Dr. Hammond's reasoning maniacs,—a class of which Guiteau is claimed as an example. How to briefly enough characterize this class for the purpose of a review, we scarcely know; even Dr. Hammond himself does not seem able to give a sharp, clear definition. It is to such that Pinel applies the term "mania of character;" and we cover the ground of a definition by an extract from Dr. Hammond's book, a quotation from Pinel, and from Morel, with a few words of Dr. Hammond's own writing:

"'The subjects of it,' he says, 'are turbulent, indocile, quick to anger, committing outrageous acts, which they are always ready to justify by plausible reasons, and who are to their families, their kindred, and their friends, constant subjects of anxiety and grief. They are continually doing wrong, either by neglect, by malice, or by wickedness. Incapable of mental or physical application, they destroy and subvert, and unsettle everything with which they are brought into contact, and which they can injure.'"

"Others apply their brilliant intellectual faculties, notwithstanding they are marked by an irregularity and incoherence of action, to the production of literary works of which the extent and the plan exceed the limit that it is possible for human power to reach. These works are often in their teachings contrary to public morality and feeling. They are dreamers, utopians, false guides, who, in their mental conceptions and in the results of their intelligence and imagination, exhibit the same eccentricity, the same shamelessness, as in their acts."

"The intense egotism of these people makes them utterly regardless of the feelings and rights of others. Everybody and everything must give way to them. Their comfort and convenience are to be secured though every one else is made unhappy, and sometimes they display positive cruelty in their treatment of persons who come in contact with them. This tendency is especially seen in their relations with the lower animals and with children."

In simple language, there are passionate, cruel, egotistic, hopelessly selfish people. Whether we all agree in thinking the term insane should be applied to them or not, most of us will believe that they are the victims of a low grade or imperfect development of brain-organization. But where is the hard and fast line between the sanity and insanity? What degree of selfishness or egotism, or what is termed in Anglo-American slang "general cussedness," is compatible with complete sanity? Who can tell? To our thinking, there is no line. Whether we believe in the theological doctrine of original

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sin or not, it can scarcely be denied that most of us are the victims to a less or greater extent of our defective brain-organization, or, in other words, if we had better cerebral organization we would be superior men and women.

We have occupied so much of space with this matter, because it seems to us a strong example of that unreasoning belief, and of that dogmatic assertion of that which is not proved, which are so characteristic of Dr. Hammond's writings, making them often charming to read but misleading as guides.

The first two hundred and sixty-two pages of the book are given up to a consideration of the general principles of the Physiology and Pathology of the Mind; the next five hundred pages to the study of Insanity. The chapter on Illusions will be apt to forever ruin the book as an authority in a contest in court. To call a person insane, even if the term "perceptive" is prefixed and he is said to be "perceptively insane," because he sees things bigger than they are, although said person knows that he is seeing wrong, and possesses every mental function in perfection, is a use of terms concerning which the scientist may quote the old proverb, "*De gustibus*," etc., but it is one which is apt to breed scientific and especially legal confusion, and which will afford most sweet material to a smart lawyer before an average American jury.

The general descriptions and accounts of insanity are very well written, accurate, forcible, and abundantly illustrated by cases mostly quoted from classical writers. We have perused them with much pleasure and considerable profit, and advise our readers to do likewise. The section upon Treatment has been to us the most unsatisfactory in the whole book: it is only thirty-eight pages long, and not a few of these few pages are occupied by abuse of American lunatic-asylums, conveying the idea that they are mostly bedlams, where brutality and ignorance vie with one another in producing torture and disease. We are clearly of the opinion that every hospital near a city should have a consulting staff, who should visit it once a week, and should be under legislative surveillance; but whether such reform will be hastened by such intemperate language as the following quotation from Dr. Hammond's treatise may well be doubted:

"Again, under the system which at present exists in many of the public asylums of this country, the attendants are usually selected from the lowest and most brutal class of the population. They are the henchmen who, having been ever ready to fight for their leader,—or 'boss,' as he is called in the political slang of the day,—are also rewarded by being appointed to situations in lunatic-asylums. To expect such individuals, whose instincts are not so mild and decent as those of a well-trained dog, to forget their natural and acquired savageism and to act in a manner approaching that of an average human being, would betray a confidence in the reformatory influence of the American public lunatic-asylum, as it sometimes exists, which, I am sorry to say, personal knowledge forbids me to share."

So far as our experience goes, these assertions are unwarranted. We have never seen such an institution, and to assert that they are "many" is to take away all force from the objurgation and give it the appearance of spiteful rant. If Dr. Hammond had asserted that most of our insane hospital superintendents are not scientific alienists, but good, kind, and careful keepers of hotels, where the insane receive a maximum of good feeding and a minimum of scientific treatment, there would have been enough of truth to give venom to his bite.

GLEANINGS FROM EXCHANGES.

SUCCESSFUL LAPAROTOMY FOR INTESTINAL OBSTRUCTION—LISTERISM WITHOUT SPRAY.—A woman, 53 years of age, previously in good health, under the care of Mr. Alder Smith, was seized with acute pain just above the umbilicus, which was severe and paroxysmal, simulating biliary colic. The abdomen was normal, without tenderness or swelling. There was constipation, vomiting of bile-stained fluid, and evident obstruction of the intestine. Morphia was given in quantities sufficient to control the pain, and several doses of castor oil were administered, but were vomited in the course of an hour afterwards. A large enema of four pints of warm sweet oil, given through a stomach-tube, introduced into the colon, did not relieve the obstruction, althought it brought away a few pieces of hard fæcal material. No tumor could be detected through the abdominal wall. The abdomen became swollen by tympanitic distention of the ileum, and the patient had the appearance of one suffering with strangulated hernia. The operation of laparotomy was decided upon after consultation, and the patient's consent obtained. She was at this time, on the fourth day after the first appearance of the symptoms, deeply under the influence of morphia, temperature 98.6°, pulse 90, belly tympanitic. She had been vomiting very slightly, no nourishment having been given except a little beef-essence and ice-water. The apartment was kept at a temperature of 65°, and the air moistened with steam. All the instruments were thoroughly washed in a carbolic lotion (1 : 40), and afterwards dried; the operator's hands and the patient's abdomen were likewise washed and dried. The operation was done by Mr. Savory. No carbolic spray was used, and no carbolic lotion or other irritant was allowed to enter the peritoneal cavity. The

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abdomen was opened by an incision extending from the umbilicus to the pubes; the intestines were much distended with flatus. Tracing them downwards, a portion of the ileum was found tightly nipped by some band or constriction; below this the intestine was flaccid and empty. On pulling this portion of the intestine and breaking through a band, a loop of strangulated intestine came out; this was intensely congested, of a deep claret color, and approaching a condition of gangrene. As soon as the constricted portion was found to be pervious to flatus, no unnecessary exploration was made as to the exact cause of the constriction, but the intestines were at once returned. A little blood-stained fluid was removed by new and clean sponges from the abdomen, and the wound was closed by silk and silver sutures: there was very little bleeding, and no vessels had to be tied. The dressing consisted of lint soaked in carbolized oil (1 in 40), long strips of plaster, and a broad flannel bandage. Morphia (gr. $\frac{1}{3}$) was given as soon as the patient recovered from the chloroform. Iced water only was ordered, and five minims of tincture of opium every hour, the temperature of the room to be maintained at 65°. The dressing was reapplied on the third day, when the wound was found to have almost entirely healed by first intention, no pus, no peritonitis. The greatest care was observed with regard to diet; she had only a small amount of essence of beef, besides the ice-water, for a week after operation. On the eighth day she was permitted to take some bread and milk and custard-pudding. She made a prompt and perfect recovery.—*British Medical Journal*, May 26.

THE CONTROL OF HEMORRHAGE IN AMPUTATION AT THE HIP.—Mr. Jordan Lloyd suggests an application of the elastic bandage to control the circulation during amputation or excision of the hip-joint as a great advance over the abdominal tourniquet or Davy's lever. His procedure is as follows. The limb is first emptied of blood by elevation, combined with gentle frictions towards the trunk. A strip of black india-rubber bandage about two yards long is then doubled, and then intrusted to an assistant after passing it between the thighs, its centre being between the tuber ischii of the side to be operated upon and the anus. A common roller bandage (thigh) is then laid lengthwise over the site of the external iliac artery. The ends of the rubber are now to be firmly and steadily drawn in a direction upwards and outwards, one in front, one behind, to a point above the centre of the iliac crest upon the same side. They must be pulled tight enough to check pulsation in the femoral artery. The front part of the band passing across the compress occludes the external iliac, and runs parallel with and above Poupart's ligament; the back of the band runs across the great sacro-sciatic notch, and by compressing the vessels passing through it prevents bleeding from the branches of the internal iliac artery. The ends of the bandage thus tightened must be held by the hand of an assistant placed just above the centre of the iliac crest, the back of the hand being against the surface of the patient's body. A piece of wood may be held in the hand to diminish the pain from prolonged pressure. In this way an elastic tourniquet is made to encircle one of the innominate bones, checking the whole blood-supply to the lower extremity. When the band is once properly adjusted, the assistant has only to take care that it does not slip away from the compress or over the tuber ischii; the former is prevented by securing pad and tourniquet together with a stout safety-pin; the latter by keeping the securing band well above the iliac crest, or even more safely by looping a tape beneath the elastic near the tuber ischii, passing it behind under the sacrum and having it held in this position.

Mr. Lloyd recommends this method with full confidence, having employed it in four cases of amputation at the hip-joint, one excision, one nerve-stretching, and one exploratory operation. He considers it perfectly satisfactory.—*Lancet*, May 26.

DEATHS DURING THE ADMINISTRATION OF ANÆSTHETICS.—Mr. J. H. Lee MacIntire, Medical Superintendent of the Bristol Royal Infirmary, reports the following cases in the *British Medical Journal:*

A man, aged 54, was admitted to the Bristol Royal Infirmary December 30, 1881, suffering from a strangulated inguinal hernia of sixty-four hours' standing. He had vomited almost incessantly from the first, and for the last twelve hours the vomited matter had been fæcal. On admission, his tongue was moist, his pulse weak but regular, and his aspect somewhat pinched. Chloroform was administered preparatory to an attempt at reduction by taxis, and everything went on well for the first minute and a half, a little over one drachm being inhaled, and this amount was divided into three parts. He then commenced to struggle a little, and his pulse was noticed to have improved, when he was seen to be about to vomit. The vomited matter measured almost a pint, and was stercoraceous and very fluid. Loud tracheal râles were now heard, and the breathing for the first time became embarrassed. He was immediately turned over, when nearly two quarts of fluid were ejected. His pupils were now widely dilated, his pulse failed, and he became cyanosed. Artificial respiration, inversion, cold affusion, and dragging forward of the tongue were at once tried; air entered the lungs freely, there were no tracheal râles, and the pupils became contracted. He now vomited again, or, rather, some more fluid poured out of his mouth.

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Attempts to resuscitate him were persisted in for over twenty minutes, but without avail. From the first arrest of pulse and respiration, neither heart-beat nor voluntary attempt at respiration was noticed. The first vomit occupied about a minute. The post-mortem examination showed the heart healthy, aorta slightly atheromatous, kidneys granular, and a small quantity of food, which appeared to be partly-digested milk, and which was about as large as a pea, was lodged just below the rima glottidis.

A woman, aged 45, who had been in the ward some days with an abdominal tumor, was, on April 19, 1883, examined under the influence of an anæsthetic mixture consisting of one part of chloroform to three parts of ether. She was known to have chronic bronchitis, and was suspected of phthisis at the right apex. She had taken some beef-tea and egg a short time before the examination. She took the anæsthetic very well, becoming unconscious in three minutes, and remaining so for ten, when her breathing was noticed to be growing shallow, but her pulse, color, and pupils remained unaltered. She took three respirations, each more shallow than its predecessor, and gave signs of being about to vomit. She was just about to be turned over on her left side, when her breathing stopped, whilst her heart could still be seen acting. Her pulse then failed, her face became livid, and her pupils about two-thirds dilated. Inversion and artificial respiration were immediately tried, and air entered the lungs freely, with a total absence of tracheal râles. The pupils were now noticed to be about three-fourths dilated, and some half-digested liquid food oozed out of her mouth. In case any might have entered the larynx, although there was no reason to suspect such an accident, tracheotomy was performed. Artificial respiration was kept up for half an hour, and inhalations of nitrite of amyl, injections of ether, cold affusion, and an enema of brandy were also unsuccessfully tried, the patient showing no sign of returning animation from the first, with the exception of closing her jaws firmly about five minutes after the commencement of artificial respiration. Post-mortem examination showed the heart-vessels and brain to be healthy, and there was no food in the air-passages. The abdominal tumor was due to tubercular peritonitis, and there was general bronchitis, and some tubercle was found in the apex of the right lung.

In both cases the anæsthetic was administered on a flannel mask which covered the nose and mouth.

A third case was that of an elderly man in the Western Infirmary, Glasgow, and the anæsthetic used was chloroform. The patient was to undergo the operation of excision of the tongue. The anæsthetic was given, as is usual in the Western Infirmary, by means of a towel, and it had not been very long administered before it was noticed that respiration had ceased, that there was marked lividity of the face, and that the patient presented many of the features of a person in the tonic stage of an epileptiform convulsion. Every effort was made to re-establish breathing, but without success. A post-mortem examination revealed nothing to account for death, beyond the presence of well-marked symptoms of asphyxia. This is the third death that has occurred in the Western Infirmary during the administration of chloroform, and its occurrence just at the present time is a striking comment on the chloroform agitation recently carried on at the Royal Infirmary; for in this case the anæsthetic was administered by the surgeon himself, with all the care that extensive knowledge and experience of the subject could give.

TREATMENT OF TRICHIASIS.—In a clinical lecture, recently delivered, Dr. Dudley S. Reynolds, of Louisville, recommended a modification of Snellen's operation for entropium where there is no blepharospasm, but merely trichiasis, performed merely with a view to give a better direction to the hairs, and where not more than two or three are turned out of the proper direction. In the original operation the surgeon passes both ends of a thread through a needle, then he causes the needle to enter into the orifice of the follicle which transmits the maldirected cilia, then passing the needle upward it is made to emerge, is brought out on the free border about a line distant from its point of entrance; the loop is made to encircle the hair, and as it is pulled through the hair is brought into the track of the needle. Dr. Reynolds says, "I have often practised the introduction of a curved cornea-needle without any thread whatever, and as the eye of the needle approaches the orifice of the hair-follicle a pair of iris forceps is made use of for seizing the hair and threading the needle with it, thus allowing the hair to be drawn through the track of the needle without the aid of the loop of thread. The advantage of this proceeding over Snellen's method is that the bulk of the thread so irritates the tissues through which it is drawn that in some instances suppuration takes place, causing the hair to fall out, when a renewed growth takes the original course and the patient receives the advantages of depilation only."—*The Medical Herald.*

CANNABIS INDICA IN MENORRHAGIA.—Two correspondents to the *British Medical Journal* call attention to the value of cannabis Indica in the treatment of menorrhagia. The ordinary tincture may be given in ten- or twenty-minim doses, repeated once or twice in the twenty-four hours. It has no evident control over hemorrhages from other causes. The following prescription is highly vaunted by Mr. J. Brown, of Bacup, who says that the

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failures after its use are so few that it may almost be regarded as a specific:

℞ Tincturæ cannabis indicæ, ♏xxx;
Pulveris tragacanthæ comp., ʒj;
Spiritus chloroformi (Br.), fʒj;
Aquæ, q. s. ad fʒij.

M. Of this one ounce is to be given every three hours.

BACILLI OF LEPROSY.—At a recent meeting of the Pathological Society of London (May 15), sections of tubercles from a leper were exhibited, which had been sent from Demerara by Dr. Hillis, and which presented the peculiar appearances that have been termed the bacilli of leprosy.

MISCELLANY.

DISEASED EGGS.—The observations of M. Barthélemy, recently praised before the Paris Académie des Sciences, demonstrated conclusively that eggs laid by fowls suffering with chicken cholera contain microbes of the same character as those contained in the blood of the hen, but that these germs only developed when oxygen was supplied by the allantoid circulation. Inoculation with portions of this embryonic structure caused death in two out of three fowls experimented upon. The results of using such eggs for human food might prove disastrous to those who should eat them raw.

HANS M. WILDER proposes to get rid of the use of "spoonfuls" as doses by the following expedient: Let each bottle (vial) be provided with a strip of paper pasted on, which strip is accurately divided with as many lines (marks) as the bottle contains doses to be taken, the lines to be numbered, beginning with the topmost, and let the direction read: Take one-eighth (fourth, twelfth, etc.) part, etc., as the direction shall run, or, perhaps better, take one division, etc. The strip to reach from the bottom of the bottle (vial) to the top of the liquid, not farther.

THE FUTURE OF PASTEUR'S GERM-THEORY.—*Customer.*—"My nephew is just starting for Sierra Leone, and I thought I could not make him a more useful present than a dose of your best yellow fever. Would you tell me the price, please?"

Chemist.—"Well, ma'am, the germs are so difficult to cultivate in Europe that I would advise your waiting for the next West India mail, when I am expecting a nice fresh supply from St. Thomas. Meanwhile, we would advise our half-guinea travelling assortment of the six commonest zymotics, and could add most of the tropical diseases from stock, at five shillings each. We have some nice Asiatic cholera just ripe; but they are more expensive."—*Punch.*

NOTES AND QUERIES.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—In your issue of June 16 I find a notice of the third edition of my "Practitioner's Ready Reference-Book," recently published, in which you state that "this edition has been adapted to the new Pharmacopœia, and has been in various ways improved, so that its popularity will probably not wane." In thanking you for your kind appreciation of my labors which you have thus expressed, allow me to call your attention, merely in the interest of justice, to the following paragraph, which may be misconstrued: "It is a pity, however, that in the matter of antidotes its author does not keep abreast of chemical science." You quote, in confirmation, disconnected portions of a chapter on antidotes (and, I may add, disconnected ingredients of some of the formulæ for antidotes), which chapter, it is distinctly stated in the work (p. 299), is not original, but the credit of it belongs wholly to Dr. Th. Schlosser, who prepared it for the *Zeitschrift d. Allg. Oest. Apoth. Ver.*, 1880, Nos. 1 and 2. This was translated by Louis Von Cotzhausen, Ph.G., and appeared in the *Amer. Journal of Pharmacy* for March, 1880. It seems, also, that you must have entirely overlooked or ignored the whole preceding chapter, prepared by myself, on "Suggestions for the Treatment of Poisoning," in which the actions of poisons are fully explained and ample directions given for treatment, supplemented by an elaborate table of nearly six pages, in which the effects of chemical and physiological antidotes are fully detailed, including the most recent advances in chemical science.

If your reviewer did not examine the body of the work more carefully than he did the title-page, some explanation may be found for the apparently disjointed arrangement to which he refers. Instead of being published by "H. C. Lea's Son & Co.," as stated in your notice, the title-page says distinctly, "P. Blakiston, Son & Co.," the publishers of the previous editions.

Yours respectfully,
RICHARD J. DUNGLISON.
814 NORTH SIXTEENTH ST., PHILA., June 21.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY FROM JUNE 9 TO JUNE 23, 1883.

TILTON, HENRY R., MAJOR AND SURGEON.—Granted leave of absence for four months. Paragraph 7, S. O. 136, A. G. O., June 14, 1883.

APPEL, AARON H., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Relieved from duty in the Department of Dakota, and assigned to duty in the Department of the East. Paragraph 3, S. O. 130, A. G. O., June 7, 1883.

GORGAS, W. C., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—The leave of absence granted in Paragraph 5, S. O. 51, c. s., Department of Texas, extended one month. S. O. 63, Military Division of the Missouri, June 19, 1883.

POWELL, JUNIUS L., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Relieved from duty in the Department of Texas, and assigned to duty in the Department of the East. Paragraph 3, S. O. 130, A. G. O., June 7, 1883.

RICHARD, CHARLES, FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Relieved from duty in the Department of Dakota, and assigned to duty in the Department of the East. Paragraph 3, S. O. 130, A. G. O., June 7, 1883.

WYETH, M. C., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Assigned to duty at Fort Maginnis, M. T. Paragraph 2, S. O. 103, Department of Dakota, June 14, 1883.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING THE WEEK ENDING JUNE 23, 1883.

Medical Inspector DAVID KINDLEBERGER and Medical Director F. M. GUNNELL to the Naval Retiring Board.

P. A. Surgeon M. H. CRAWFORD from the Navy-Yard, League Island, Pennsylvania, to the United States Steam-ship "Pinta."

Surgeon JEROME H. KIDDER resigned, to take effect June 28, 1884, and granted leave till that time.

Medical Director THOMAS J. TURNER, orders of the 7th June modified to continue on duty as a member of the National Board of Health till June 30, 1883.

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PHILADELPHIA, JULY 14, 1883.

ORIGINAL LECTURES.

CLINICAL LECTURE

ON THE TREATMENT OF ECZEMA OF THE HANDS.

BY ARTHUR VAN HARLINGEN, M.D.,

Professor of Diseases of the Skin in the Philadelphia Polyclinic.

GENTLEMEN,—The treatment of eczema of the hands must vary according to the locality and variety of the disease. That which is proper for acute eczema of the thin integument over the back of the hands would be useless if applied over the thickened epidermis of the palm, and what would be useful in chronic eczema of any part of the hand might be quite injurious in the acute form of the disease. In the following remarks I shall consider the management of each variety separately.

And, first, with regard to acute eczema of the backs of the hands and fingers. The skin here differs from that on other parts of the body chiefly in its comparative delicacy and in its exposed position. The constant uses to which the hands are put in the ordinary labors of the household among women and in the various occupations and handicrafts of men lead to the exposure of the skin to numerous irritants. Cooks have their hands immersed in dough and salt water; maids and washerwomen are exposed to the action of hot water and soap in washing dishes and scrubbing; bricklayers, plasterers, dyers, polishers, grocers, bakers, bar-tenders, all are exposed to moisture and the contact of irritating substances; and these occupations are chiefly apt to furnish cases of acute eczema of the hands. The appearance presented in acute eczema of the part under consideration has nothing distinctive about it. We have the small vesicles unbroken or broken with serous exudation, scratch-marks, and crusts, or occasionally the red and weeping surface of eczema rubrum. The only disease liable to be confounded with this is scabies, where the lesions are often similar. Of course to treat a case successfully the diagnosis must be made with certainty. Scabies, presenting itself usually in various parts of the body simultaneously and showing the peculiar burrows of the itch-insect between the fingers or on the side of the hand, with a history of contagion, is the only disease with which eczema of the backs of the hands is liable to be confounded.

The treatment of acute eczema of the hands must be preventive as well as curative. The surface of the skin must be protected from air and water, and chiefly protected from the irritative agencies which so often have been the exciting causes of the disease. The baker must keep his hands from the dough, the washerwoman hers from the hot soap-suds. This is often no easy matter for those who are dependent upon their special handicraft for their daily bread. But without such abstention from the irritating cause the prospect of speedy recovery is poor and the prognosis must be to a certain extent unfavorable. Still, much can be done in the way of protection. Gloves of leather or india-rubber may be worn; the latter, in particular, I often find of great use. Workpeople imagine that they cannot manipulate while wearing rubber gloves; but it is surprising how the hands can accustom themselves to this covering. The chief difficulty is found in cases where the patient has to work in corrosive substances. Here some other means must be employed, and I think that if the hands are thoroughly anointed with some unctuous substance, as tallow, much can be done towards preventing the action of irritating substances upon them. A proper covering to protect the hands when exposed to irritants has not yet been devised, and is certainly much to be desired. Where only small areas of the skin are involved, the "liquor gutta-perchæ" of the Pharmacopœia, a solution of gutta-percha in chloroform, often acts as a very efficient protector. The patient may be provided with an ounce-bottle of the solution, having a camel's-hair brush in the cork, and may paint the affected part one or more times daily. The evaporation of the chloroform leaves a thin, impervious, and slightly elastic film of rubber.

As regards the more strictly medical management of these cases, the local treatment is by far the most important in the majority of cases, and I shall only speak incidentally of general therapeutic measures.

Acute eczema usually attacks the backs

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of the hands, the sides of the fingers, and the wrists, commonly leaving the palms unaffected. Its character here is not different in any essential particular from eczema of other parts. When very acute and severe it takes on the appearance of a dermatitis, especially if too stimulating or irritating remedies are first employed. Frequently a severe eczema of the backs of the hands begins insidiously by the formation of a few papulo-vesicles, and the patient thoughtlessly applies some quack ointment, with the result of aggravating the original disease to a marked degree. If the system chance to be in such a condition as to favor the occurrence of an outbreak of eczema, any irritant may act as a torch and light up the fire of a much more general eruption. In such cases the local treatment, to begin with, must be of a most soothing character. Dilute lead-water, or, where inflammation, discharge, and crusting, with much heat, are present, lead-water poultices form often the best application to begin with. The lead-water poultice is made by mixing dry bread-crumb with the dilute lead-water of the Pharmacopœia until a mass of proper consistency is made, and this is to be applied cold—often ice-cold is best—and frequently repeated.

When the violence of the inflammation has somewhat subsided, or when the affection has not been so acutely inflammatory, the application of cloths wet with lotio nigra is of advantage. In other cases the fluid extract of grindelia robusta serves a good purpose, as in the following wash:

℞ Ext. grindeliæ robustæ fluid., f℥ii–iv;
Aquæ, Oi.—M.
Fiat lotio.

The cloths should be saturated with this wash and applied to the skin in such a manner as to allow evaporation to proceed until they are dry. The lotion is again applied to the cloths *in situ*, and then evaporation allowed to go on as before. I find this the best plan of employing this remedy, which I have used extensively in acute eczema for some years, and which almost invariably acts very happily. Now and then I come across a preparation which, owing, as I suppose, to some defect in the pharmaceutical manipulation of the extract, seems to have irritant qualities; but this happens so rarely that I retain great confidence in the valuable curative properties of grindelia.

Many cases of acute eczema of the hands get well under the use of a saturated solution of boracic acid, and this application is particularly useful where there are numerous vesicular lesions inclining to coalesce and break down into eczema rubrum.

In such forms of the disease it is also that the old and tried calamine and zinc wash frequently proves efficacious. It is composed as follows:

℞ Pulv. calaminis præp., ℥i;
Pulv. zinci oxidi, ℥i–℥ii;
Glycerinæ, ℥iii;
Aq. rosæ, ℥iv.—M.

I have recently used with advantage a solution of sulphate of zinc in water:

℞ Zinci sulphat., ℥ss;
Aquæ, Oi.—M.

This is by no means a new remedy, but is good enough to be kept in mind, especially in those acute but partly-developed cases where numerous incipient vesicles appear under the skin between the fingers and tending to spread over the back of the hand and wrist. It should be applied on cloths, which may be wetted every hour or so during the day and two or three times at night.

Among ointments, the "unguentum diachyli" of the Germans is the most valuable, when it can be had. It requires a skilled pharmaceutist to make it, and its preparation is very troublesome. When made very carefully it is extremely soothing; but if the olive oil which enters into its composition is not of the best, or if there should occur any carelessness in manipulation, it is very irritating. The following formula, to which my friend Dr. Duhring has called attention, is, I believe, the most satisfactory: one part of freshly precipitated (from acetate of lead) pure white hydro-oxide of lead is rubbed with two parts of water, and mixed well with six parts of the best Lucca olive oil. It should be stirred for about two hours over a hot-water bath near the boiling-point, and cooled with constant stirring until the proper consistence is obtained; while cooling, a drachm of oil of lavender to the half-pound of ointment is added.

The diachylon ointment thus prepared is to be spread thickly on rags and applied to the affected parts. It should never be rubbed in with the finger, because the same effect cannot be gotten from it when applied in this way.

Ointments of oleate of zinc or oleate of

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bismuth may be of service in some cases of acute and subacute eczema. The ointment of oleate of bismuth is most conveniently prescribed according to the following formula:

℞ Bismuthi oxidi, ʒi;
Acidi oleici, ʒi;
Ceræ albæ, ʒiii;
Vaselini, ʒix;
Ol. rosæ, ♏ii.—M.

This very elegant pharmaceutical preparation was first suggested by Dr. McCall Anderson, several years ago, and it is a most useful remedy in eczema of whatever locality, but its action is particularly satisfactory in eczema of the hands.

Other ointments suitable in the subacute forms of eczema of the hands are the mild mercurial preparations. One which I have employed in many cases with most satisfactory result is the ointment of calomel and zinc:

℞ Hydrarg. chlor. mite, gr. x–xxx;
Ung. zinci oxidi, ʒi.—M.

Ointments of ammoniated mercury, and, in the more chronic forms of the disease, of the red oxide of mercury, may also at times be employed with advantage.

Eczema of the palms is usually of a chronic character, and the treatment quite different from that which has been described as appropriate to the disease as found on the backs of the hands or on the fingers. The disease is not likely to be mistaken for any other affection except the palmar syphiloderm. This, however, it does closely resemble in many instances. When signs of syphilitic disease exist elsewhere, or when the eruption runs up from the palm towards the wrist, some characteristic features of syphilis are apt to present themselves, so as to render the character of the palmar trouble unmistakable. But when we are forced to form an opinion from the eruption on the palm alone, this is sometimes quite difficult. Usually the lesions of eczema are characterized by diffuse irregular patches of thickened epidermis, with fissures here and there and jagged outlines. The syphilitic eruption, on the other hand, is characterized by deeper infiltration, with less epithelial thickening and scaliness. Moreover, the lesions, if carefully examined, will almost always be found made up of rounded patches, single or coalesced. It is, in fact, a papular eruption concealed by the thickness of the epiderm. Itching may or may not be present in either case, and I do not know what other sign can be given as distinctive of the two affections when the palm alone is affected. Proper treatment quickly affects the syphilitic affection, while eczema of the palm is terribly intractable.

The diagnosis being made, however, we must remember that when eczema of the hands presents itself in the chronic forms so often met with, the treatment given as suitable for the acute and subacute varieties is useless and quite out of place. The remedies here required are, first, such as will soften and remove the redundant epidermis, and, second, those calculated to remove the infiltration of the cutaneous tissues.

Among the former, maceration by hot-water applications, and by rubber bandages and gloves, may be mentioned. The hands, or the palms alone, if these are the parts chiefly affected, may be soaked in water as hot as can be borne for some minutes before the stimulant applications to be described are applied. This softens the horny outside layers of the skin, and renders them infinitely more penetrable to various agents than they would otherwise be.

Rubber bandages, and especially rubber gloves, are to be highly recommended for the same purpose. They should be worn continuously for some days, being turned inside out and cleansed with cold water every day, while the hands are wiped on a dry towel. Under the use of the rubber, eczematous hands covered with horny epidermis become softened so as to permit the employment of ointments, which would be perfectly useless were they applied prematurely. The rubber applications themselves are only rarely curative. Though the disease may seem at times to have been entirely removed by their use, it quickly returns when they are removed. If it is borne in mind that the rubber applications are only preparative in their action, much disappointment will be avoided.

Alkalies in various forms are very efficient agents in macerating the epidermis. The saponis viridis, or "Hebra's green soap," a soft soap containing an excess of potash, is a very good preparatory application. It may be rubbed into the indurated patches with a bit of flannel, with the addition of a few drops of water, or it may in some cases be applied in the form of a poultice spread thinly on rags and kept in position until the epidermis becomes softened. Sometimes solutions of potassa—ten to

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thirty grains to the ounce—may be used with good effect. If the weaker solution is employed, the patient himself may apply it with the aid of a rag or a stick, rubbing the solution into the affected parts until a feeling of warmth is produced, and then washing it off with pure water. The stronger solutions should be employed by the physician himself, and a good deal of friction may be used, care being taken to confine the action of the remedy to the indurated tissues. What is wanted is to soften the hard tissues; and the effect of the potassa may be heightened if the part affected is soaked for a little time in hot water to soften the tissues. The potassa then takes hold more rapidly.

Recently I have been using a solution of papain, a substance which exercises a sort of digestive influence on the epidermis, and which has served a good purpose in some cases of horny, indurated palmar eczema by preparing the way for other remedies. The following formula may be employed:

℞ Papain., gr. xii;
Pulv. sodii bi-borat., gr. v;
Aquæ, ʒij.—M.

Paint on the part twice daily.

Having softened as far as possible the induration and callousness which are characteristic of chronic eczema of the palm, further applications may be made. Of those apt to be of use, the tarry and mercurial preparations are prominent. Tar ointments of various strength, containing from one drachm of tar to the ounce up to the officinal tar ointment of the Pharmacopœia, may be employed. Solutions containing tar, as the "Liquor picis alkalinus,"—

℞ Picis liquidæ,
Potassæ causticæ, āā ʒi;
Aquæ ad ʒi.—M.,—

or the preparation known as "Liquor carbonis detergens," may be used in a diluted form, say beginning at one part to four of water, and gradually increasing the strength.

Another tarry preparation may be mentioned, the "Tinctura saponis cum pice;" it is made by dissolving tar and sapo mollis, or "green soap," in alcohol, equal parts of each of the three ingredients being taken.

The application of this remedy may be followed by that of the unguentum diachyli above described. In fact, the fingers and hands should always be wrapped up in ointments after the application of any of the remedies of a tarry and caustic character, or of those intended to macerate the epidermis. A good ointment to use after these washes is the following:

℞ Hydrarg. ammoniat., gr. v;
Zinci oxidi, ʒiii;
Ung. picis U.S.P., ʒiv;
Ung. aq. rosæ, ʒvii;
Vaselini, ʒiss.—M.

Rags or narrow bandages should be smeared thickly with this ointment, which is to be kept in contact with the skin continuously, being removed only when the tarry and caustic applications are made, or when used alone the ointment may be simply wiped off every evening, and a new application may be made immediately.

Two other forms of treatment remain to be described,—blistering and the application of plasters. The former plan is chiefly to be put in practice when the eruption is situated on the backs of the hands or on the fingers; it is performed by simply painting the parts with cantharidal collodion, and dressing the blister with one of the milder ointments. The other procedure is occasionally of use in cases where the palmar surface is thickly covered with dry horny epidermis. It consists in keeping the following ointment applied on narrow strips of muslin constantly in apposition to the surface:

℞ Hydrargyri vivi, gr. c;
Terebinthinæ, gr. c;
Emplast. plumbi, gr. ccl;
Resinæ pini, gr. l.—M.

This should be kept in contact day and night for a considerable period. As it is very tenacious, it rarely requires to be changed.

Finally, the fissures which occasionally occur in eczema, particularly about the fingers, are to be treated by long-continued soaking in hot water, followed by the application of a fine pencil of nitrate of silver in each fissure, and then wrapping up in one of the ointments described.

Constitutional treatment is rarely of use in chronic eczema of the fingers, though arsenic is occasionally found to do good. The acute varieties of eczema are to be treated like the same disease elsewhere. In any case a chronic affection, the prognosis of eczema of the hands should always be guarded. Some cases resist all treatment stubbornly.

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ORIGINAL COMMUNICATIONS.

SOME CONTRIBUTIONS TO THE HISTOLOGY OF PHTHISIS.*

BY WILLIAM H. MERCUR, M.D.

THE object of this investigation, which is limited entirely to the morphology of phthisis, has been to ascertain, as far as possible, by means of histological studies, the exact character of the lesions peculiar to phthisis of the lungs.

It is true that no direct proof of the process of the disease can be obtained by histological research; but from a careful study of phthisis in all its stages many correct and important inferences may be drawn, particularly now that the laws of cell activity in its progressive and retrogressive changes are so well established by experimental pathology and histology.

This is, then, a mere record of personal observation, based upon studies made thus far. I have found it most convenient and useful to study the specimens by myself and draw my own independent inferences in regard to the various histological points which presented themselves, leaving the careful study of the immense literature bearing on the subject until I had come myself to somewhat definite conclusions.

This course was one rather of necessity than choice, as the works on the histology of phthisis which came under my notice were so contradictory in character that I had no alternative but to pursue an independent research. It is hardly necessary to add that this investigation was not begun without some previous knowledge of the subject, as for two years past I have made a thorough study of the lungs, both in health and disease.

As will be seen by referring to my original manuscript,† I was fortunate enough to secure a large number of lungs from persons dying of phthisis. My endeavor has been to bring the histological changes as far as possible into correspondence with the naked-eye appearances. In this latter regard much discrepancy exists, and suppositions and inferences drawn from the naked-eye appearance alone are often not at all borne out and confirmed by the microscopic section.

I would like to acknowledge my indebtedness for the extensive facilities offered by the University of Pennsylvania to those undertaking pathological or histological researches, and particularly to my friend Dr. H. F. Formad, for his encouragement and valuable guidance in all matters pertaining to pathological investigation. I also wish to thank Dr. J. W. Blackburn for the beautiful and accurate drawings he has furnished me.

CHAPTER I.

GENERAL SUMMARY OF THE HISTOLOGY OF PHTHISIS, DEDUCED FROM THE MICROSCOPICAL STUDY OF CASES.‡

What is phthisis? All modern scientific pathological morphologists seem now to concede that phthisis is "*a local tuberculous inflammation of the lung.*"

Having defined this point, the question naturally arises, What is a tuberculous inflammation, and how does it differ from ordinary inflammation? This is defined by the products.

Simple inflammation has its limited course, and terminates in absolute rapid destruction of the tissue affected, in perfect healing, or in the production of a definite connective-tissue hyperplasia.

Tuberculous inflammation is unlimited and never heals, unless converted into a simple inflammation. Histologically the products of a tuberculous inflammation only differ from those of simple inflammation in the well-known tendency to form nodes and to undergo cheesy change. This peculiarity of tuberculous inflammation is common to other specific inflammations. If such a tuberculous inflammation occurs in the lungs, it is designated "phthisis pulmonum."

This tuberculous inflammation leads like any other inflammation to secondary catarrhal changes, the latter being more prominent in tuberculous inflammation, thereby leading to the identification of catarrhal pneumonia with phthisis.

We next ask ourselves, What is a tubercle? A tubercle may be defined to be "*the*

* An abstract from an inaugural thesis, to which the Henry C. Lea prize was awarded at the Commencement of the Medical Department of the University of Pennsylvania, 1883.

† The bulk of this research, containing the histories of the individual cases, and the detailed microscopical description of sections from which these conclusions were drawn, are embodied in my original manuscript, deposited in the Stillé Library of the University of Pennsylvania.

‡ The following observations refer exclusively to the lesions in consumptive lungs, and not to tuberculosis elsewhere, as the scope of this investigation will not permit a description of systemic lesions.

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anatomical expression of a tuberculous inflammation."

In regard to the use of the designation "miliary tubercle," the word "miliary" should not be used as a histological criterion, but ought rather to designate the expression of a general disease, or the products of that disease. In this essay, therefore, the word is used only in this sense. It must be conceded that the formation of tubercles in the lung is entirely different from the formation of true miliary tubercles elsewhere: hence why not limit the term "miliary" to the small nodes found in "general miliary tuberculosis," and simply designate the products of the tuberculous inflammation in the lung as tubercles? Of course the foregoing does not exclude the occurrence of secondary true miliary tubercles complicating the phthisis.

CHAPTER II.

HISTOLOGY OF ACUTE PHTHISIS.*

Lungs taken from acute cases of phthisis show distinct signs of acute lobar pneumonia, in addition to more or less advanced tubercular changes. In the cases examined, both lungs, or sometimes only one, showed perfect typical hepatization in the lower lobes, while at the apices and in the middle lobes the usual tuberculized products—*i.e.*, softening, cheesy masses and cavities—were seen. The latter were of moderate size, few or numerous, and filled with a somewhat purulent, semi-liquid material. Marked congestion and occasional hemorrhagic infarcts were observed. No two cases, however, were alike. A similar condition was observed in cases supposed to be chronic, where the croupous condition hastened the lethal result. The preceding refers to the naked-eye appearance, and certainly indicates a complication of croupous pneumonia. The microscopical examination convinced me that the condition mentioned is really a croupous pneumonia, complicating the phthisical process, and that invariably in acute and generally in chronic phthisis this pneumonia hastens the lethal result.

The histological appearances, as seen in sections made from lungs of acute phthisis, are as follows. In the section taken from the apex, where the destruction was prominent, tuberculization of the alveolar septa, catarrhal exudate, and cheesy degeneration of both are conspicuous. The vesicular walls, wherever intact, are thickened by infiltration of lymphoid cells, and well-developed tubercle-tissue is seen around the bronchioles and blood-vessels, and also within the lumen of the same. Giant cells are very scarce. In the portions of the lungs which are hepatized, the same changes are seen, but in a less advanced stage. The greater portion of the air-vesicles are, moreover, seen filled with an exudate composed of lymphoid cells, fibrin, and blood, with the definite character of a croupous pneumonia. This croupous exudate fills the air-vesicles of a whole lobe uniformly, just as in typical lobar pneumonia, and does not limit itself to individual acini, nor leave numbers of air-vesicles unfilled, as in catarrhal affections of the lung.

Thus we find in the histological picture a direct corroboration of the naked-eye appearance. These conditions do not seem accidental. They are seen in specimens prepared from many cases, and the naked-eye appearance of all lungs of acute or suddenly terminating cases of phthisis which I have seen in the Philadelphia Hospital, and elsewhere, was identically the same.

Cheesy changes were rare or totally absent in these cases. Tissue-destruction went on apparently by suppurative, liquefying changes; and even this was by no means a prominent feature. The drawing on the opposite page (Fig. 1) shows the croupous condition described.

Some cases of acute phthisis show a rather pleurogenic origin of the disease. In one case in particular there was decided chronic tubercular pleurisy and a distinct infiltration of tubercle-tissue which extended from the pleura inwards into the lung-parenchyma. Fibroid changes were also observed in this case, although not prominently. The absence of giant cells and of cheesy changes was particularly conspicuous. The lower lobes of the lungs showed extensive croupous pneumonia, confirmed by microscopical examination. Another interesting feature, which will again be alluded to in discussing chronic phthisis, is the white, irregular patches, resembling tubercle-nodes. They are scattered all over the lungs, and, as a rule, are called miliary tubercles. The drawing on

* See appendix of original manuscript for details.

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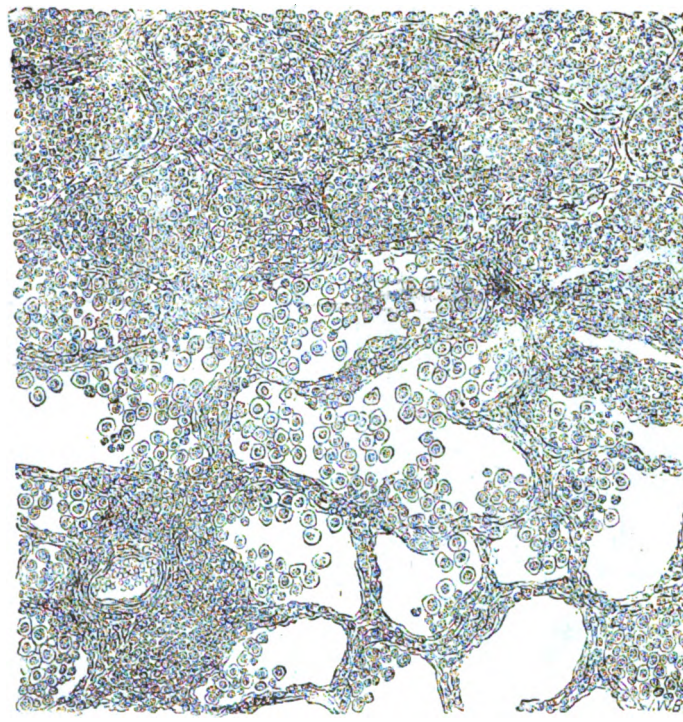
FIG. 1.



ACUTE PHTHISIS.—Upper part shows air-vesicles filled with croupous exudate, which consists of lymphoid cells and fibrin. Lower part shows the catarrhal exudate in the air-vesicles. In some places the alveoli show coal-dust. × 200.

page 712 (Fig. 2) shows a section of one of these nodes, taken from the apex, where they are more conspicuous on account of the less extensive croupous changes. Immense numbers of these nodes are seen in the parenchyma of every phthisical lung. They are, however, not true tubercles, and least of all "miliary" tubercles, as it has been the custom to call them. It will be seen from the illustration, which is a camera-lucida drawing, executed, like the other cuts, by an accomplished artist and microscopist, that the air-vesicles of a given area are filled with catarrhal exudate, while only in the periphery of the node tubercle-granulations are seen. That this is actually the case is evident from the faint outlines of air-vesicles which can be seen within the node. It is also certain that these are air-vesicles, and not submiliary nodes, from their similarity and uniform size, corresponding as they do exactly to the air-vesicles outside the node. By the use of reagents and by brushing, nearly the whole node may be transformed into a batch of naked and empty air-vesicles, which form a single lung-acinus.* I would like to lay stress upon this latter point,—viz., that these nodes or masses are blocked-up lung-acini. They correspond to the latter in shape and size, and are just as uniform in character as lung-acini themselves. Fig. 2, already referred to, shows one of these acini with blocked-up air-vesicles.

From the foregoing, as well as from the detailed microscopical descriptions,† it seems reasonable to infer that the tuberculous process begins primarily within the smallest bronchioles within the air-vesicles, and also, though less frequently, in the infundibula of an individual lung-acinus. In regard to this formation, my specimens show distinctly that *first of all* an exudate is thrown out, consisting of lymphoid cells, which are probably white blood-corpuscles. The exudate is aided by proliferation of the sub-epithelial con-

*An excellent diagrammatic illustration of a lung-acinus will be found in Rindfleisch's "Handbuch der Pathologie," p. 349, fig. 134.

† See original MSS.

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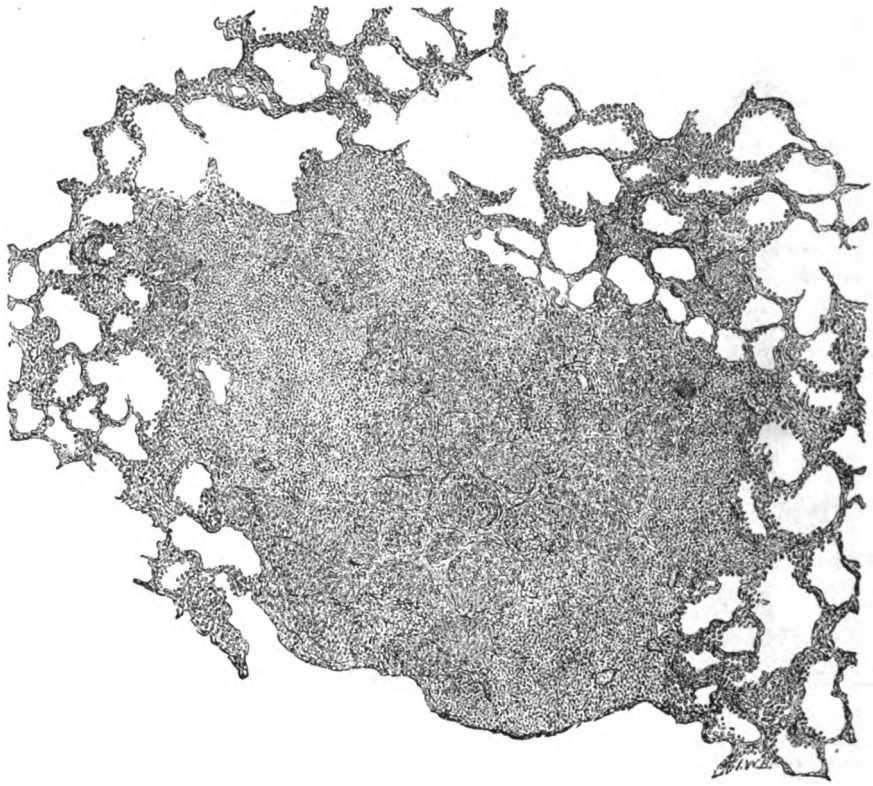
FIG. 2.



GRANULATION-TUBERCLE, SIMULATING MILIARY TUBERCLE.—Section through a node (of size of pin's head) from a phthisical lung. The main bulk of the node is made up of air-vesicles (well seen in centre) filled with exudate; at the periphery of the node some massive tubercle-granulations, with giant cells, are seen. ×30.

nective-tissue cells; it is seen in some places partly organized, in others completely transformed into perfect tubercle-tissue, which ultimately obliterates the lumen of the bronchioles. A beautiful illustration of this total obliteration of a bronchus is seen in the drawing on the opposite page (Fig. 3).

Simultaneously with this intra-bronchial tuberculization and organization, tubercle-granulations appear around the bronchiole, associated with diffused true tubercle-tissue. This process spreads sooner or later along the bronchus and also into the infundibulum, attacking from here the air-vesicles which compose the acinus and which communicate by means of the infundibulum with the affected bronchus. The process may also begin primarily within the air-vesicles, in a similar manner as described above for a bronchus. It is distinctly seen that the tubercle-tissue within them is due pre-eminently to an organization of the exudate (see obliteration of the air-vesicles by organized tubercle-tissue in Fig. 3), and not to a thickening and hyperplasia of the alveolar walls, as described by Green.

The changes in the blood-vessels, seen from my preparations to be only secondary, are not noticed until tuberculization in the bronchi and air-vesicles is far advanced. They consist of a lymphoid infiltrate of the adventitia and of the perivascular spaces, leaving the lumen, in cases of acute phthisis, perfectly patulous.

Green's views on the histology of tuberculous products, in his "Introduction to Pathological and Morbid Anatomy," 1881, may be summed up as follows. He considers in many instances that interalveolar products enter largely into the formation of tubercle, but that these products are made up of epithelial cells and small cells resembling leucocytes; also that tubercle thus formed undergoes cheesy softening; that in some cases the air-vesicles contain giant cells, which, according to Dr. Klein, originate from the

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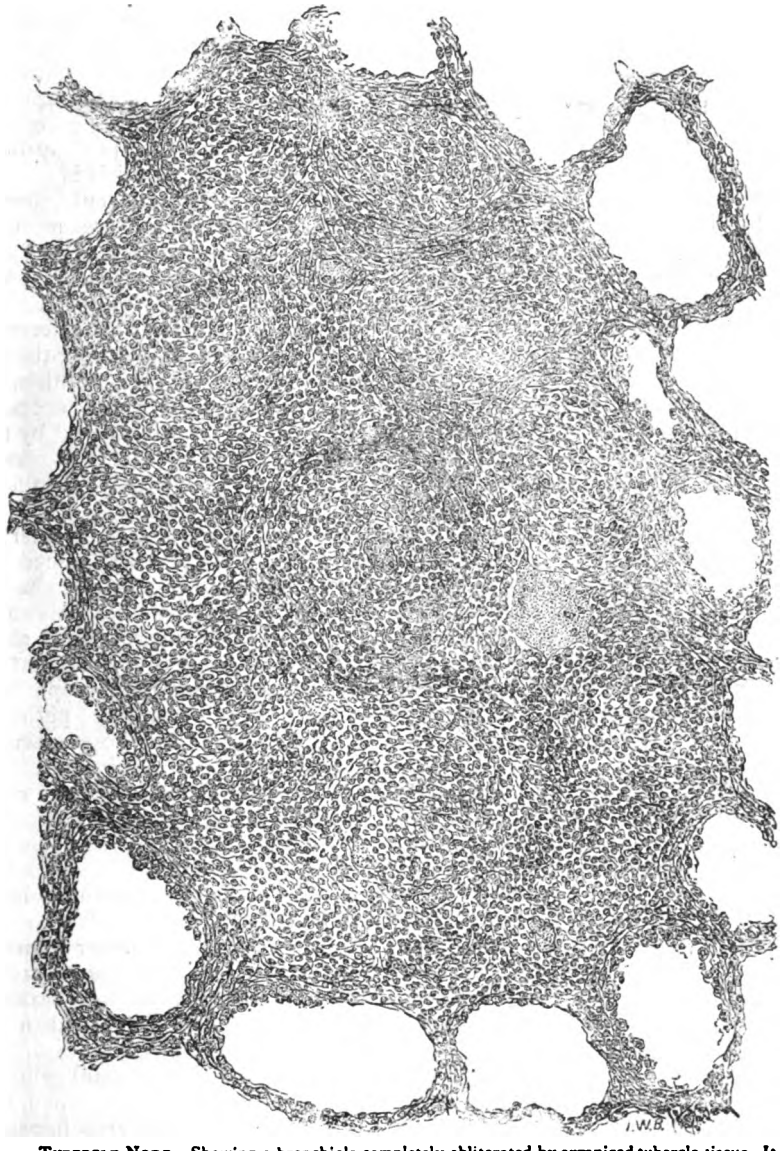
FIG. 3.



TUBERCLE-NODE.—Showing a bronchiole completely obliterated by organized tubercle-tissue. It owes its origin to the organization of the exudate within the air-vesicles and the lumen of a bronchiole. The latter is indicated by a ring of coal-dust. It will further be seen that upon the size and outlines of an individual acinus depend the size and shape of a tubercle-node. The outlines of the air-vesicles can be seen by careful focusing. Giant cells also seen. × 100.

epithelial lining of the same. The more permanent tubercles are formed from an overgrowth and extensive thickening of the alveolar walls, obliterating the lumen, in which finally only some giant cells remain. By thus advocating an extra- rather than an intra-alveolar formation of tubercle-tissue, Green does not seem to admit organization of the exudate proper. An illustration of this method of the formation of tubercle-tissue is seen in his book, p. 236, Fig. 88.

Dr. Delafield's "Studies in Pathological Anatomy," 1882, is an admirable work, to which I only had access after the completion of my studies last summer. He gives, as the result of his investigation, some interesting observations in regard to the or-

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ganization of a new tissue, both within and without the air-vesicles. These observations correspond so closely to my own that I quote them below in full. The changes in the bronchioles are not mentioned by him.

Page 97: "The diffused tissue presents itself to us with a structure varying according to the length of time which it has existed, and to understand it we must study both its earlier and later stages. In the earlier stages we have to distinguish between a production of interstitial connective tissue, with obliteration of the air-vesicles from pressure, and a growth of a peculiar new tissue within the cavity of the air-vesicles, and in their walls. This interstitial connective tissue is produced in the walls of the air-vesicles, the bronchi, and the blood-vessels,—the whole process being essentially an extra-alveolar one,—the vesicles suffering chiefly from pressure.

"The growth of the tubercle-tissue is different. The process is both an extra- and an inter-alveolar one. The solidification of the lung-tissue is accomplished by the formation of new tissue, both in the walls of the air-vesicles and within their cavities.

"In the walls of the air-vesicles there is a growth of round and polygonal cells and intercellular basement-membrane, or the cells are formed in excess, and the basement-membrane is split up so that the natural outlines of the vesicle are lost.

"The cavities of the vesicles are filled in two ways. Some are partly or completely filled with polypoid outgrowths from their walls; in others, there is a mass of round and polypoid cells, with or without giant cells, embedded in a basement-substance formed in the cavities of the vesicles, but at first not continuous with their walls. If the air-vesicles, in either of these ways, are not completely filled, the remaining space may be occupied by epithelial cells. . . . These two processes—the growth of interstitial connective tissue, and the growth of tubercle-tissue, in the walls and in the cavities of the air-vesicles—are usually associated."

CHAPTER III.

HISTOLOGY OF CHRONIC PHTHISIS.

The origin of chronic phthisis does not seem to be altogether identical with that of acute phthisis, although some of the chronic cases examined give the impression that the changes are a continuation of those described in acute phthisis.

Here again it is nearly impossible to give a collective description, each case having certain individual peculiarities. The study of chronic phthisis is also less satisfactory than that of acute, because the pathological processes are more difficult to trace, and the picture of the structural changes, on account of their more remote origin, is harder to interpret. Again, it is not justifiable to draw inferences from the examination of the lung-tissue in any given case of chronic phthisis, because two-thirds of it are not accessible for study, having been destroyed by the pathological process, so that they present only vacant spaces (cavities), or pulpified, structureless, cheesy masses.

We can, therefore, only infer vaguely what preceded these last-named changes. Still, the morbid process can sometimes be traced, and in these cases I endeavored to give as accurate a description* as possible of the morphology of the remnants of lung-tissue available for microscopic section.

The lungs in chronic phthisis differ morphologically from those in acute phthisis in the following particulars:

1. Fibroid changes are more marked.

2. The blood-vessels are decidedly implicated in the process, and the veins are invariably congested.

3. The vesicular walls are less infiltrated, are invariably denuded of their epithelial lining, appear thin wherever not implicated in tubercle-tissue, and show distinctly the yellow, elastic tissue of their walls. They are more frequently empty than in acute phthisis. (See Fig. 4.)

4. The formation of giant cells is a very conspicuous feature.

5. Mucoid change goes hand in hand with cheeesy degeneration, occasionally well marked, while in acute phthisis purulent fatty degeneration appears the means of tissue-destruction.

6. The contents of the air-vesicles appear very much macerated, and the cells undergo decided retrograde changes, showing numerous compound granule-cells and molecular débris.

7. Large areas of lung-structure are frequently unaffected.

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* See original MSS.

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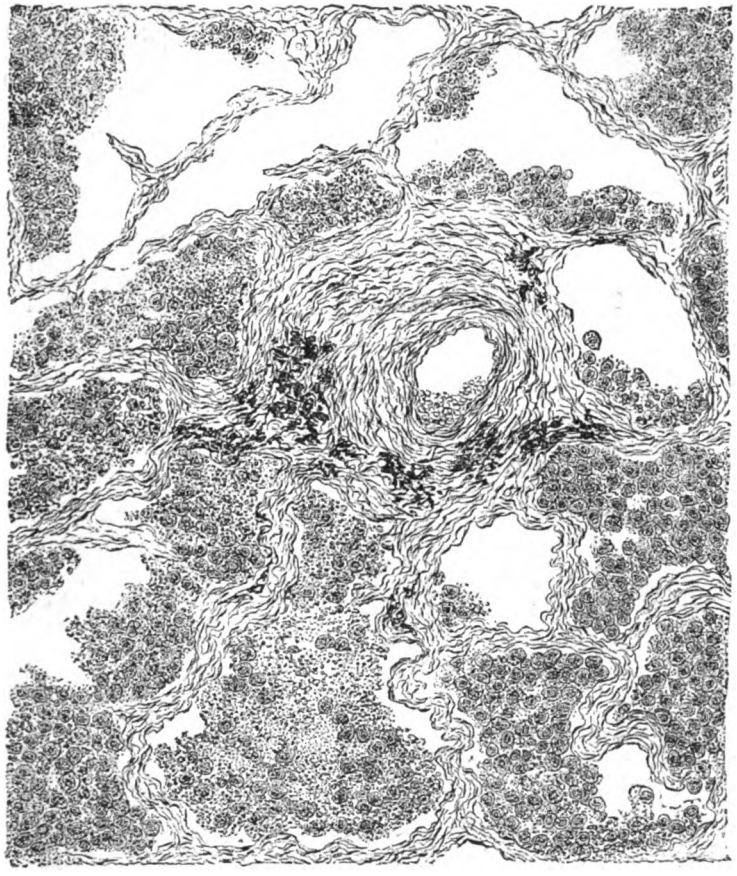
FIG. 4.



CHRONIC PHTHISIS.—Showing the vesicular walls devoid of infiltration, and the catarrhal exudate mostly in a state of retrograde change. Fibroid thickening and pigmentation seen around a blood-vessel. × 200.

8. A distinct connective-tissue capsule is frequently observed around a tuberculized acinus.

The mode of tuberculization of lung-tissue in chronic phthisis is identical with that described in acute, excepting that the process in the former is more advanced, both progressively and retrogressively. Recently tuberculized tissue, advanced fibroid changes, and areas of cheesy degeneration and unaltered lung-tissue, alternate in a very marked manner. The latter is not observed in acute phthisis, where the process is more uniform.

Air-vesicles are occasionally seen, filled with croupous exudate; and it would appear that even in chronic phthisis the complication of a croupous pneumonia is one of the factors inducing the lethal result.

The tuberculized nodes described already in connection with acute phthisis may also be present here, either in moderate quantities, or thickly scattered throughout the lung, according to the number of individual acini affected. (See Fig. 2.) The independence of the process of tuberculization in each individual acinus is well seen in the sections from which the last-mentioned drawing was made. Each tuberculized bronchiole seems also to act as an exciting factor in the implication of the acinus emptying into it. In chronic phthisis the bronchioles are occasionally filled with cheesy, degenerated, catarrhal exudate, or indifferent débris. An obliterating endo-arteritis of the blood-vessels is quite a common occurrence.

Giant cells, rare in acute phthisis, are frequently present in enormous numbers in

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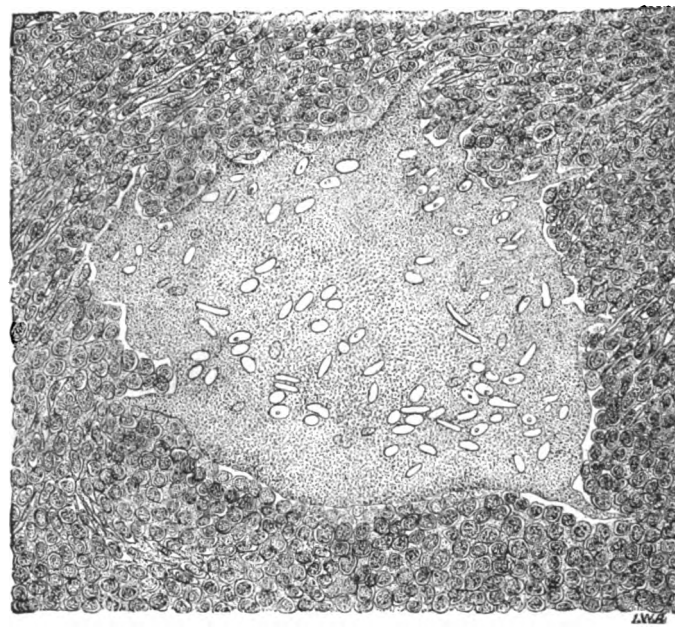
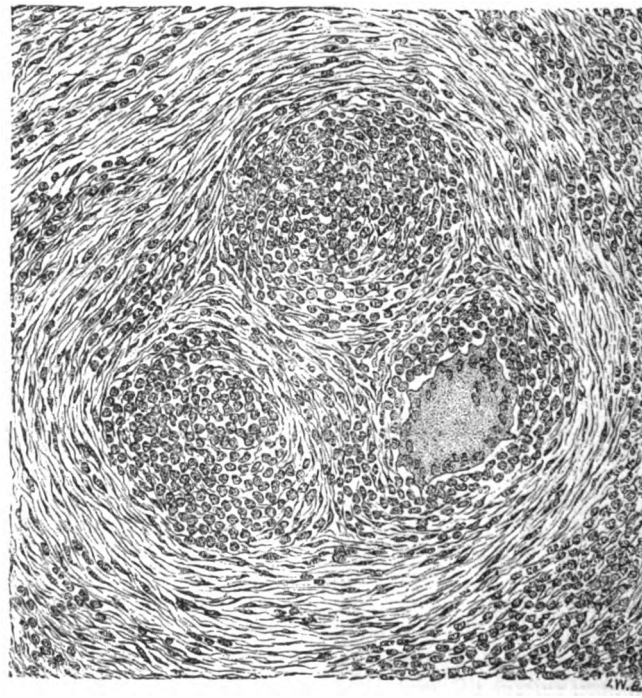
FIG. 5.



GIANT CELL IN GRANULATION-TUBERCLE.—Showing spider-like appearance.

FIG. 6.



MILIARY TUBERCLE.—Showing fibroid change and submiliary tubercles. × 200.—*Formad's Manual of Microscopic Diagnosis.*

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the chronic form of the disease. Occasionally they are of enormous size, and exhibit a peculiar, spider-like appearance, never observed in tubercle elsewhere. In Fig. 5, one of the above-described cells is beautifully seen.

In order to show the strong contrast between true submiliary nodules and the false or apparent ones described in this paper, I introduce here (see Fig. 6), through the kindness of Dr. H. F. Formad, a drawing taken from his "Manual of Microscopic Diagnosis," showing a true miliary tubercle, containing three submiliary nodes. Compare Fig. 3 with Fig. 6.

OBSERVATIONS ON CARIES OF THE MASTOID PROCESS, OF THE TEMPORAL BONE, IN CHILDREN.

Read before the Philadelphia County Medical Society, April 18, 1883.

BY LAURENCE TURNBULL, M.D.,

Aural Surgeon to Jefferson Medical College Hospital, Philadelphia.

IN the new-born infant at full term, the mastoid cells are situated behind the tympanic cavity, and are in their rudimentary state represented, as I show you in this skull, by this small tubercle and the horizontal portion. In front you see this ring of bone which holds the membrana tympani, and, inside of this, the bones of the ear. The extension of this horizontal portion backwards and downwards at a later period, as in the young boy's or girl's temporal bone, forms the cavity of the mastoid process, smaller, but as well formed as in the adult.

If a vertical section be made so as to pass through this horizontal portion of the temporal bone of the boy of four years of age, these mastoid cells will be found to be bounded externally by a part of the squamous bone, which is superior and posterior to the meatus externus; and it is often this part which becomes affected in cases of diseases of the mastoid cells in early life. Towards the front, the mastoid cells are therefore immediately covered by the posterior wall of the osseous meatus. Caries of the latter often extends to this wall, and the necrosed cells are cast out through the external meatus, as in the specimen which I show you, which gives a view of the smooth surface of the meatus, the upper surface containing the diseased cells. At other times, the destructive process is observed to spread from the external meatus towards the mastoid cells, and are removed by cutting through the skin, muscles, and tissue over the external surface of the temporal bone and mastoid process. In these three specimens which I show you, they were all removed from the upper portion of the mastoid process. In every instance they were the result of scarlet fever in boys of three, four, and five years; and here I may state that although this fever is the chief cause of the diseased condition of the bone in children, yet we have it follow measles, smallpox, scrofula, tuberculosis, rickets, syphilis, and cancer. This latter form is more rare. The notes of a recent case will, I trust, be of interest. I will report it at the conclusion of this paper, and will now dwell for a few moments on the

DIAGNOSIS OF CARIES OF THE TEMPORAL BONE.

Caries is a decay of the bone, or, in other words, a corrosion or erosion on a portion of it, brought about by the contact of some destructive agent. It differs from necrosis, or absolute death of a bone. In caries the surface may only be diseased, and the removal of this effects a cure: at other times, the deeper portions are so affected that nothing but the death or removal of the bone will relieve the patient. In the bones of the ear, especially the mastoid process of the temporal, it is almost always attended with a discharge from the external meatus, termed "otitis media purulenta," and where the bone is affected, there is a swelling of the auditory canal. The discharge has usually a peculiar odor, with sanious or meat-like washings of the suppuration. If a preparation of lead, as a wash, is employed, it will blacken it. By means of the microscope we can often corroborate the fact of the bone being diseased, when not seen by the discovery of elastic fibres or bone-cells in the discharge. The best means to discover the condition will be the use of the speculum and forehead mirror, throwing a good light into the meatus, with the careful and gentle use of the probe, which will serve to detect a loose bone, or bone which has become soft and can be moved by the probe. It must be borne in mind that the floor of the tympanum has a rough feeling, not unlike that of

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caries, when touched with the probe, even when the bone is not diseased.

The dangers from careless probing are as follows: destruction of the membrana tympani, dislocation of the ossicula,—for, as a rule, in such cases, the articulations are already relaxed,—or by a disarticulation of the stapes—which is generally very loose in the fenestra ovalis—pus may escape into the cavity of the labyrinth, and the expansion of the auditory nerve may be destroyed, or openings may be made into the cranium.

In many of the cases in which I have operated, either a fistula was already present, or the soft parts had to be cut through by an incision at the insertion of the auricle, being careful not to cut forward, for fear of loosening the posterior wall of the external auditory meatus, or reach the membrana tympani. If there is an opening in the bone, it should be enlarged with the sharp spoon.

In other cases, I had, at times, to employ the chisel in order to enlarge the small openings. The granulations lying in front are to be removed with the sharp spoon. If the antrum is opened and laid bare in this way, it can be examined most carefully with the probe, or the tip of the finger introduced. If loosened sequestra are present, they can be seized with the pincers or forceps and extracted, or, as proves most suitable, may be pried out or divided by the bone-forceps. The sharp spoon also offers the best services in removing the bone that has become softened by caries. Use it only when the bone is found to be softened to a certain degree: there are some sequestra that cannot be reached, as in case shown in this drawing. In the after-treatment, keep the wound open by a thick drainage-tube, or tent, so that in the subsequent days we may have a full view into the depths of the wound, from which now the sequestra, gradually loosening themselves, may be detached with the probe, and removed, packing around it powdered boracic acid until we are sure that the mastoid process is in a sound condition. The important point in the after-treatment is the regular removal of the accumulated secretion; for which purpose we prefer syringing at first with antiseptic solutions of permanganate of potassium, boracic acid, or sulphurous acid, or chloride of soda; later with neutral, and lastly with astringent fluids, but nothing that will have a tendency to leave a deposit, as iron, lead, or insoluble powders.

Case of Encephaloid Cancer, involving the Temporal Bone, Mastoid Cells, and Antrum, showing itself first in the external osseous auditory meatus as a polypoid growth from diseased bone. Removed three times, yet reappearing.—Walter G., aged 4 years, residence, New Jersey, was sent me by the physician, with a desire that I should remove the mucoid polyp filling up the meatus, with the following history: "The abnormal growth in the ear of Walter G. began to develop some time in January, 1883, and about the 7th of March I removed it by torsion and touched the pedicle with cupri sulph. Soon after, the abscess in the mastoid process, behind the ear, made its appearance, as also did the redevelopment of the mucoid which you removed, followed by a sympathetic abscess of the 'Antrum of Highmore.' Regarding the case as one of a serious character, as well as one of interest, I have referred the matter to you for further and more experienced treatment."

Walter G., a bright, well-nourished, and healthy-looking boy, was received, with his mother, into Jefferson Medical College Hospital, April 16 (having made two visits to the Aural Department under my supervision, April 12 and 13). I found the following changes in his condition, from his previous visits: first, the evidence of the rapid growth of the polypoid mass, which had been removed from the auditory canal; second, the abscess at the base of the mastoid cells was filled up, and appeared bluish red, and very much swollen, involving the sterno-cleido-mastoid muscle; third, the so-called abscess in the antrum was a hard swelling of the face and upper jaw, and pressing upon the eye. When the little patient was placed under the influence of ether, a probe was introduced alongside the mass of granulations to the temporal bone in front, which was found rough, softened, and diseased; and when reintroduced and passed backwards into the mastoid process, a similar condition was noticed. To determine the condition of the antrum, an exploring-needle was passed into the swelling, under the lip, and also alongside of the tooth, but no pus was found. To be sure of this swelling, the first molar tooth was removed (all the teeth were sound), and a drill was introduced through the bone into the tumor, and nothing but grumous blood followed. A solution of carbolic acid and tepid water was then injected into the tumor, and with considerable force was returned through the nose, but no pus was found in it, only colored by the blood. This examination confirmed the diagnosis of its being a case of malignant disease. We proposed to the mother the removal of the

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diseased bone with a portion of the jaw, but she stated she would rather see him dead. Three of our colleagues saw the patient with us, and all agreed in the diagnosis which I had made.

The child died two months later, of exhaustion following spontaneous hemorrhages from the fungoid mass which sprang from the external auditory meatus. No post-mortem was allowed.

A SIMPLE FORM OF NASAL DOUCHE.

Presented at a Meeting of the Philadelphia County Medical Society, held April 18, 1883,

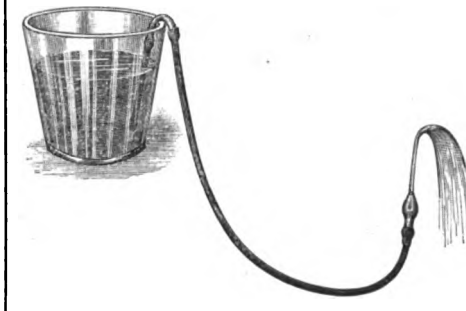
BY FRANK WOODBURY, M.D.

GENTLEMEN: I will ask your indulgence for a few moments, in order to exhibit a portable, efficient, and economical form of nasal douche which I devised some time ago, and have used for over a year in place of all other forms of douche with complete satisfaction. I do not claim novelty as to principle, because the siphon is nothing new, but bring it before the Society merely because of its cheapness and simplicity.

The douche consists of an ∩-shaped elbow of glass tube, to which is attached a short (about three inches) piece of ordinary rubber tubing on one arm, and a long (twenty inches) piece from the other, the latter having a hollow, somewhat conical, glass nozzle, so as to occlude the nostril when pressed into it, and keep in the fluid delivered through a central opening. The short end is also tipped with a glass tube so as to hold it open and prevent collapsing. When not in use the entire apparatus is contained in a small paper box (2¼ × 1¼ × 1 inch), which may be conveniently carried in the pocket, or may be carried in a valise without breaking. In order to use the douche, a glass tumbler, or any similar receptacle, should have placed in it the required amount of warm water (100° F.), medicated as desired; the douche should be immersed in the fluid, and then the long tube (tightly pinched between the fingers so as to retain its contents) is drawn out of the reservoir until the glass elbow hooks over the edge of the cup, where it is self-retaining; the fluid will flow from the nozzle as long as it is depressed below the level of that in the receiver. The flow can be interrupted by simply dropping the nozzle back into the tumbler. It fulfils perfectly the purposes of a nasal douche, where such an instrument is desired. The douche may also be used for acute affections of the ear (after scarlet fever, etc.), for the eye, and generally for such purposes as an instrument of this size is adapted; among these may be mentioned the administration of milk, broth, etc., to patients unable to sit up, and too weak to drink in the ordinary way.

The advantages of this form of nasal douche are (1) its simplicity, there being no parts that can rust or get out of order; if any portion is broken it can be replaced at a trifling cost; (2) its convenience, being compact in form, occupying little space, taking but a moment to put into operation; (3) its safety, the stream being delivered without force, simply by gravity; it is almost impossible that the fluid should be forced into the middle ear; and (4) its efficiency being granted, its chief advantage is that it is the most economical douche that is in the market, its cost being insignificant.

In common with every one engaged in general practice, I have found patients for whom a nasal douche might be useful for a short time, but the comparative expensiveness of the Thudichum's douche, and its danger of breakage, have often made me hesitate before ordering it. On this account I devised the simple form which I have presented to-night. Any one can make one for himself in a few minutes at a cost of about twenty-five cents. The rubber tubing costs ten cents per foot, and the glass a trifle only. Having given it to Mr. Hayes, of the St. George Pharmacy, with the request that they should be made and sold at this price (twenty-five cents)



to patients, he very kindly consented; so that if any one does not wish to take the trouble of making the douche, he can get it by sending this amount to Mr. Hayes, Broad and Walnut Streets, Philadelphia.

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Unlike other nasal douches, this can be sent by mail.

In conclusion, I would also invite the attention of the Society to the employment of gelatin capsules for the dispensing and dosage of remedies used in making the solutions; as these capsules are closely fitted, deliquescent salts may be very conveniently dispensed in them, each one containing sufficient for making the desired amount of solution for use at one time. I have here some gelatin capsules containing twenty to thirty grains of phosphate of sodium, chloride of sodium, etc., which may be passed around for inspection.

THE RADICAL CURE OF VARICOCELE BY EXCISION OF THE VENOUS PLEXUS, ILLUSTRATED BY THREE CASES.

BY H. C. BOENNING, M.D.

FOR the radical cure of varicocele I have recently performed an operation, which in three cases has resulted in a speedy, complete cure, and which, if properly done, is superior to the ordinary operation,—because, first, it is *simple, easily performed*, and the parts under the sense of *sight*, as well as feeling; second, it is invariably successful; third, the free drainage prevents absorption of pus or other discharges. It is well known that as the result of the so-called subcutaneous ligation (intra-scrotal) of the veins, gangrene of the testicle, abscess, sloughs, and pyæmia have occurred, with in some cases a fatal result. Free drainage is an acknowledged important factor for the prevention of blood-poisoning, and is as necessary in the operation for the cure of varicocele as in any other wound. In the ordinary varicocele-operations, also, the sense of feeling is entirely and alone relied upon; it is undeniable that frequently puncture of the veins, or incomplete ligation of the veins, occurs, resulting in complications interfering with the obliteration of the varicocele; further, in some cases the varicocele through collateral circulation returns a few weeks after the so-called radical operation.

The operation of excision is performed as follows:

The parts are shaved; the patient is anæsthetized; an incision is then made through the anterior portion of the scrotum about three-fourths of an inch to the left of the raphé, and about two inches in length, from near the lower portion of the scrotum up; the tissues are divided, layer after layer, upon a director, until the cord, veins, and testicle are exposed; the vas deferens is carefully drawn over to the right; the veins are isolated, separated, and an aneurism-needle is passed, armed with a strong catgut or waxed-silk double ligature; the veins are then ligated above and below, the ligatures being placed half an inch or more apart; the veins are then divided midway between the ligatures, as is the thyroid gland in tracheotomy, and the stumps of veins beyond the ligatures are retrenched, if necessary, by the scissors. All the veins, however, should not be ligated; *one or two should be left to return the blood* supplied by the arteries of the cord. The general inference that the veins of the cord are sufficient to carry off the venous blood is incorrect; and, hence, to assist the circulation the above plan should be adopted, lest gangrene ensue, or a chronic congestion of the testicle. After the veins have been ligated, divided, and retrenched, the parts should be carefully cleansed, as is the peritoneum after abdominal section, and returned to their places; the ligatures, cut about four inches long, drawn out of the sac at the lower portion, and sutures applied from above downward; three silver wires should be deeply passed *through* the lips of the wound, so as to catch the visceral layer of the tunica vaginalis, leaving a lower aperture of half an inch in length for drainage.

The parts should be supported either by the scrotal support (see *College and Clinical Record*, vol. ii. page 264) or towels or oakum. The dressings should be light,—carbolized oil, salicylated cotton, lead-water, and laudanum; or a poultice when indicated: the latter will do good service from about the seventh to the twelfth day. Internally, good nourishment, quinine, or, if fever arises, an aconite fever-mixture, is indicated.

From about the third day very mild warm injections may be used to advantage: thus, one part of carbolic acid to a hundred of water, ten grains of permanganate of potassium to a quart of water, etc., at about ninety-five degrees of heat, should be daily employed in washing out the sac. If the drainage-opening show a tendency to close, a small piece of oiled lint may be passed between the lips of the wound. After the tenth day gentle traction may be made upon the ligatures, which all come away before the fourteenth day.

The patient should remain in bed a few days after the ligatures come away. The remaining wound gradually granulates, being eventually a sinus, which with proper stimulants (one of the best being nitric acid ten to fifteen drops to the ounce, or a probe coated with the nitrate of silver and passed into the wound daily, every other day, or as circumstances require) heals in a short time. The

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quantity of fibrin, etc., effused will leave a "lump" in the scrotum, which, however, finally disappears.

The cases I operated upon by this method, as stated before, have made excellent recoveries. In the first case the scrotum was long, pendulous, and, instead of making an incision parallel with the raphé, I cut at right angles to it, making two curved incisions, thus removing about two inches of tissue from the front of the scrotum and materially shortening the sac when the sutures were applied. In this case, after the third day all fever subsided, and the ligatures came away, one on the seventh, the other on the thirteenth day. The second case was also successful, but devoid of any especial points of interest.

The third case did not do so well at first. The scrotum was very short, the varicocele slight, but sufficient to keep the patient out of the United States army. At his request I operated. High fever for a week and a slight slough of the tunica vaginalis occurred; then the case assumed a better character, and is now nearly well, nothing but a small opening still remaining.

After the patients leave their bed, I urge them to wear a good suspensory for a few months, after which they cast it aside. All of my cases have been up, attending to their various pursuits, by the sixteenth day; in fact, the last two were enabled to resume their work before the fourteenth day.

The advantages of the operation, briefly, are these: simplicity, certainty of success, and rapidity of cure,—to say nothing of the free drainage and the free exposure of the parts involved: hence the impossibility for any surgeon who knows anatomy to do other than what the case demands.

528 Franklin St., Philadelphia.

REDUCTION OF BACKWARD LUXATION OF THE THUMB.

BY J. F. HEEBNER, M.D.

I HAVE a minor operation, which I have utilized for the reduction of "backward luxation of the proximal phalanx of the thumb," and I would invite the profession to try it when opportunity affords. In many cases the ordinary method of extension, and the manipulation of Prof. Crosby, of New Haven, fail to correct the deformity, and usually tenotomy is resorted to for the purpose of dividing the two heads of the flexor brevis muscle which clasp the head of the metacarpal bone. The idea occurred to me that these heads of the muscle could be separated, and the head of the bone liberated, without the operation of subcutaneous division, and by a means which would be less apt to be followed by subsequent impaired motion, and shorten the time of convalescence.

I use two ordinary uterine tenaculi, bending their ends to a very acute angle: one is intended for the inner head and the other for the outer head of the muscle. Begin to insert them by holding them as nearly parallel as possible to the metacarpal bone of the thumb, and, by a circular motion, insert the curved end of the tenaculum, keeping the point subcutaneous. Next introduce the tenaculum under the head of the muscle, in the same manner as you would a tenotome; then, turning the point upward, you have the head of the muscle in the elbow of the tenaculum. Insert the second one in the same manner. Now pull the heads of the muscle asunder, and allow an assistant to push the phalanx in place. In order that the tenaculi may be withdrawn easily, care must be taken not to insert it too far from the normal position of each head of the muscle; and in withdrawing it to make a circular sweep of the handle.

Scranton, May 16, 1883.

NOTES OF HOSPITAL PRACTICE.

HOSPITAL OF THE UNIVERSITY OF PENNSYLVANIA.

CLINICAL SERVICE OF PROFESSOR D. HAYES AGNEW, M.D.

Reported by Guy Hinsdale, M.D.

TRAUMATIC URINARY FISTULE—EXTERNAL PERINEAL URETHROTOMY.

GENTLEMEN,—This boy, 16 years of age, while in a freight-car was in some way caught between timbers and sustained a severe injury. Since this accident he has been unable to urinate. There are several reasons that may account for his inability to make water. The pelvis may have been seriously injured, or there may have been a severe shock or injury to the lumbar nerves or to the spinal cord, occasioning a loss of power. There may also have been a direct injury to the perineum.

Not long after the accident a hard lump of small size appeared in the perineal

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region. In a few days this lump softened and discharged, urine then appeared at the opening, and there has been ever since a perineal urinary fistula. There may have been a fracture of the pelvis, and the urethra may have been damaged by a spicule of bone. You will also note that on the left side of the perineum there is induration for two inches around the opening of the fistula; it is an inflammatory swelling excited by the presence of the urine. Any severe contusion of the perineum may thus excite a stricture. The pressure upon the urethral channel may occlude it, producing distention of the tube immediately behind the stricture, the wall subsequently becoming more or less attenuated, and a fistula results.

But what is the treatment? Suppose the boy had come to us at once, and before urinary infiltration had taken place. The proper course would have been to pass, if possible, an instrument into the bladder. A good-sized soft catheter would probably answer this purpose best; it would not only unfold the plications of the urethra, but also tend to prevent the urine from escaping between the instrument and the walls of the canal. It is not always an easy matter after an injury of this kind to reach the bladder safely and quickly. The inflammatory swelling which rapidly ensues, or the particular direction in which the laceration runs, may present great obstacles to the introduction of the instrument; but every possible resource should be employed before abandoning the attempt, and of course the sooner the attempt is made the less difficulty will be encountered.

Suppose you are successful: you may nevertheless find that the water escapes between the sides of the instrument and the wall of the urethra. Under such circumstances the catheter not only fails to protect the tissues from urinary infiltration, but adds to the irritation of the surrounding parts. If, however, the urine flow wholly through the instrument, and no uneasiness be experienced by the patient when it is allowed to accumulate for a little while, its escape may be regulated and the bladder emptied at convenient intervals. But how long may the instrument be retained? This you will have to determine by the tolerance of the parts and the position of the rupture. When the latter is situated in that portion of the urethra in front of the scrotum, and when the risk of involuntary or spasmodic expulsion of the urine is over, the vesical irritation attending the injury having subsided, I believe that it is better not to wear a permanent catheter at all. Nevertheless, it should be used to empty the bladder at such regular intervals as you will have found the urine to be comfortably retained. When the deeper portion of the urethra has been torn and the instrument has entered with difficulty, it is better to allow it to remain five or six days without being withdrawn, unless it give rise to irritation, indicating that its presence is harmful. I believe that its retention for a longer time than this not only retards the healing process, but is likely to beget an irritable and consequently a non-retentive bladder.

While you are treating your patient in this way, you should also cover the parts with either cold or hot fomentations, whichever may afford the more relief. The vesical irritation may be palliated by rectal injections of laudanum and starch-water, or by opium suppositories.

But if from the extent of the injury the instrument cannot be inserted, or it should fail to carry away all the urine, you will have to carry an incision directly down through the perineum until the damaged part of the canal is reached, affording a new channel through which the urine may readily escape. Attention may then be directed to the restoration of the urethra, and as the wound granulates and eventually heals the water takes its natural course.

I shall now pass an instrument into this urethra and ascertain its condition. This sound has been warmed to the temperature of the body, and is well oiled. You observe that the urethra is very sensitive. It is so because it has been out of use for a time. The sound passes in a certain distance, then stops. The obstruction is due to the deposit of inflammatory lymph. I try an instrument the next in size smaller. These are troublesome cases. When you can succeed in curing them it is a great surgical triumph. A cure transfers the patient from a very miserable condition to one of great comfort.

Having passed this instrument (a sound, No. 13, French) through, I will follow it up immediately with a larger one. Notice that I introduce my finger into the rectum. It serves as a guide in passing the instrument into the bladder. Whenever any

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difficulty is encountered in the introduction of a catheter, never omit this important point. If you neglect it you may do irreparable damage. The instrument may slip in between the bladder and the rectum if there is want of precaution in this matter.

[NOTE.—Instruments up to the size No. 22, French scale, were then passed. On the 23d of November, 1881, Prof. Agnew being out of town, the operation of external perineal urethrotomy with a staff was performed by Prof. Ashhurst.

The staff was first introduced into the bladder; then a director was passed through the fistula until it touched the staff. The director being left in this position, an incision was made in the median line, and, the back of the knife being turned towards the rectum, the urethra was exposed where those instruments came together. The tissues between the wound in the median line and the fistula, which was a little to the left, were then divided. The cicatricial tissue about the stricture was quite dense.

A catheter was then introduced, its extremity projecting but slightly beyond the neck of the bladder; it was secured and allowed to remain for six days. About five weeks after the operation the patient was discharged cured.—REP.]

HYDROCELE.

This man comes here with a swollen or enlarged scrotum. On the right side you will notice, and in fact on both sides, but more particularly on the right, a swelling of peculiar shape; it resembles an hour-glass that is contracted in the middle, but with a swelling above and below the seat of constriction. The man says that the swelling has existed for fourteen years. He thinks that it commenced at the bottom and increased upwards. You will notice that the swelling remains of the same size whether the patient is standing or lying. These facts enable us to say approximately that it is not a hernia. When we grasp the tumor and make it tense, fluctuation can be easily recognized; furthermore, when we subject the tumor to a strong light, shutting out the rays that are diffused above and below, we find that the swelling is translucent. Putting together all these facts,—its shape, its manner of growth, the impossibility of its reduction, its fluctuation, and its translucency,—there can be no hesitation in saying that it is a hydrocele. Hydrocele is a collection of serum in the tunica vaginalis testis. The presence of this serum is a proof of the existence of an inflammatory process, though of a very subacute kind. The disease is not, as a rule, traumatic in its origin. The peculiar constriction present in this case may have been produced by an inflammatory process after the introduction of a trocar at some previous tapping. I have seen cases where a complete septum has been formed in this way, resulting in a double hydrocele.

The treatment may be either palliative or radical. The former merely consists in making a puncture with the trocar and canula, and drawing off the accumulated fluid; but if you propose to cure your patient, after allowing the fluid to drain out you may then introduce into the sac the pure tincture of iodine. Two drachms are usually sufficient, and the iodine is allowed to remain. At first there is a feeling of pain or of numbness. The inflammation that results is quite acute, but on the fourth or fifth day begins to subside. The serum which follows the introduction of iodine is gradually absorbed; it is of a higher grade than the original contents of the sac. After the inflammatory process is over, the hydrocele is cured and the sac is changed. But how is it changed? It is a mistake to suppose that consolidation of the two layers of the tunica vaginalis occurs throughout its entire extent; the cavity is never obliterated. The action of the iodine is to modify the secreting surface, and, if you should open the sac and examine its walls, you would find that they would present an irregular, dull, dry, fibrous appearance, with delicate threads of organized lymph intersecting the cavity of the tunica vaginalis.

Tincture of iodine is almost an infallible remedy, being without tendency to produce suppuration, but giving rise to just enough inflammation to yield adhesive lymph.

In making the puncture we must avoid the testicle, which lies behind the serous accumulation. Taking the trocar, I introduce it nearly perpendicularly at first, and then I depress the handle. The absence of resistance indicates when the cavity of the tunica vaginalis is reached. The fluid that escapes is straw-colored, and will co-

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agulate upon boiling or after adding to it the proper reagent. It is highly albuminous.

There are several conditions which, if present, forbid the attempt to make a radical cure. If you find an enlarged testicle, never inject anything into the sac; or, if you obtain a coffee-ground fluid upon tapping, it shows a diseased condition of the sac itself, and an injection would be improper. In this case we find the testicle enlarged, and it would be improper to inject the iodine. We shall therefore have to be content with the palliative operation.

VARICOCELE.

This patient has received a severe injury from the horns of an enraged bull. He says, however, that before the occurrence of this accident he had a swelling of the veins of the scrotum. The injury is therefore complicated with varicocele. This plexus of veins empties into the spermatic vein, which on the left side is destitute of valves. The blood-vessels therefore yield to the force of gravity, and become enlarged and convoluted. Upon the other side we find there is also a swelling extending half-way down the scrotum. It is soft and compressible, and when the proper pressure is made can be reduced. The patient has therefore a hernia on the right side and a varicocele upon the left.

Both these affections behave alike in the recumbent posture: the veins of the varicocele become emptied, and the swelling disappears; the hernia also returns within the abdomen. But as the patient rises and stands upon his feet the conditions vary very much; on the right side, as long as I guard the external abdominal ring, there will be no enlargement, but exerting the same pressure on the left side the tumor enlarges, and the difference is quite marked. This is an easy method of diagnosis. The varicocele is not of enough importance to require immediate operation. Should he complain of pain in the back and a dragging sensation in the loins, and should there be a change in the testicle itself, with a liability to softening, then operative interference would be proper; but here I shall advise simply the use of a suspensory bandage and local tonic applications of cold water, our object being to give tone to the whole dartos structure. He must wear an accurately-fitting suspensory bandage, his bowels must be kept regular, and he must abstain from excessive exercise and heavy lifting.

In some instances the mental symptoms may be prominent; patients may fear that impotency is threatened; but even if on one side the testicle should be utterly destroyed, emasculation will not follow, for the remaining testicle is fully competent to insure virility. Endeavor to restore mental quietude; induce him to tolerate the inconvenience, and to dismiss from his mind any such forebodings.

When an operation is required we should attempt the obliteration of the veins by including them carefully in a subcutaneous ligature. It is not always possible or necessary to get them all, but only the chief ones. Sometimes this operation fails.

Since this man has a hernia, he should wear a truss. An examination shows that behind the protrusion there is a large mass of lymph or plastic matter, due to the injury that he has sustained. It will in time disappear, and we shall hasten this process by painting it from day to day with iodine. We shall also use adhesive straps and a compress. On the right side he should wear a truss. As I introduce an exploring needle into this swelling, a dark-colored fluid exudes. It is not necessary to open it, but, like blood-tumors elsewhere, the disorganized coagula will be absorbed.

TRANSLATIONS.

CONGENITAL ABSENCE OF ONE KIDNEY.—Dr. Paul Guttmann reports two cases of congenital absence of the right kidney complicated with anomalies of the genital organs, in *Virchow's Archiv* (for April 6). A review of the literature of the subject for twenty-five years was made by Beumer, who found forty-eight cases of total absence of one kidney recorded in this period. Thoma, in his great work upon the size and weight of the different organs in the human body in health and disease, adds a few cases to this list, which has been still further extended recently by Falk, Schwengers, and Thiebierge, until medical literature at present contains records of about seventy cases. To this number Guttmann adds the following: B. K., a boy 15 years of age, had suffered with kyphosis, the result of a fall when he was three

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years old; this was followed by a chronic abscess, which spontaneously opened three years before admission. When he came in, he had marked dyspnœa, cyanosis, œdema, catarrh of the lungs, hypertrophy of the heart, enlarged liver, albuminuria, with a daily discharge of only five hundred to seven hundred cubic centimetres of urine of specific gravity 1012–15. After his death the left kidney was very greatly enlarged, about twice the normal size for a boy of this age. The ureter was hypertrophied and also dilated. The right kidney and ureter were completely absent. The right seminal vesicle and vas deferens were also missing; the left about normal. Both testicles were normally developed, and apparently were alike. Unfortunately, they were thrown away before further examination could be made upon this point. Both suprarenal bodies were present.

P. A., a girl 20 years of age, died of consumption in the hospital. Physically she was poorly developed; the genitalia appeared like those of a girl of thirteen years; there was also extensive emaciation.

At the post-mortem examination the left kidney was found to be enlarged about one-third in size over the norm; the uterer was markedly dilated, and contained a small uric acid calculus. The right kidney was completely wanting, as well as the right ureter. The aorta was small, and there was no right arteria renalis. The genitalia were poorly developed, but apparently nothing abnormal existed up to the point of junction of the cervix and body of the uterus, when a difference in development was noticed. On the right side the broad ligament did not extend to the level of the cornu, but was defective. Apparently there had been originally a uterus bicornis, in which the left horn had developed, but the right had completely failed to do so. The right ovary and Fallopian tube were only rudimentary, and were recognized under the peritoneum at the side of the pelvis; the left ovary was also small; the left Fallopian tube was present and had its normal relations; the right, on the contrary, was only half the proper length, the peripheral extremity being apparently normal, but the uterine end terminated in a blind extremity.

As a rule, in these cases there is hypertrophy of the remaining kidney. It is heavier and larger than normal, which Beumer, after microscopic examination, declared was not due to increase of the glomeruli and tubules, and therefore is to be attributed to hyperplasia of the connective tissue. Leichtenstern, on the contrary, has found the glomeruli enlarged, and also the diameters of the tubules, so that the increase in size is both hypertrophic and hyperplasic. As regards the two cases under consideration, Guttmann found amyloid degeneration in the boy, and detected both hyperplasia and hypertrophy; in the girl there was no real hypertrophy of the anatomical elements, but simply hyperplasia.

ANTIPYRETIC ACTION OF AIR-BATHS.—In a communication to *Wratsch* (1883, Nos. 3 and 4), Dr. Traubenberg discusses the influence of air-baths upon the temperature, pulse, respiration, and muscular energy in the febrile state. Having a room so arranged that its temperature could be controlled, patients were brought in upon their beds without any covering; but at the same time the skin was diligently rubbed over the entire body either with the bare hand or with a woollen glove, so that the skin was made red; then the patient was allowed to rest until the hyperæmia had faded, or until he felt cool, when the rubbing was resumed, and this was continued during the entire air-bath. The bath continued from twenty to sixty minutes, or, as the rule, half an hour in most of the cases. Without quoting the phenomena in detail, the general results may be given as follows: there was a decided though not great reduction of temperature both in the axilla and rectum, respiration became fuller and fell off about six to the minute on the average, the pulse likewise became fuller and decreased about thirteen beats in the minute. There were within certain limits considerable variation in the results, the effects being modified by the time of day, the greatest reduction corresponding with the time of the physiological ebb, which occurs between three and nine o'clock in the morning. The effects also varied considerably with reference to the temperature of the chamber itself. The least effect was obtained from the lowest temperature on account of the rapid contraction of the vessels, and in high temperatures there was not sufficient radiation from the body. In this respect a medium range of temperature must be selected. The most appro-

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priate temperature to use must be a matter of experiment with each case. The period of the fever also has an influence: the later in the disease, the more effect is noticed from the air-baths. With regard to the duration of the bath, which also must be considered as affecting the results, the author considers that Liebermeister's aphorism applies,—"the effect is not proportional to the length of the bath." In other words, it is more advantageous to give more frequent and less prolonged baths than the contrary. Individual peculiarities also are important: the younger the patient, the more extensive the bodily surface, the less muscle and fatty tissues are developed, the greater is the radiation. There is less likely to be depression of the patient after air-baths than after the cold-water applications. They are also more convenient and easier of application.—*Centralblatt für Chirurgie*, No. 21.

ATROPHY OF THE BRAIN AFTER AMPUTATION OF AN EXTREMITY.—The Academy of Medicine, at its last meeting, listened to a very interesting paper and report of a case by M. Bourdon, in which there was a local atrophy of the cerebral structures after amputation, this being the seventh example which this observer had collected. In a previous memoir on the subject M. Bourdon had demonstrated that the amputation of a member causes atrophy of the upper portion of the cortical layer of the convolutions in the motor region, as a result of the loss of functional activity. This is an important fact from a physiological stand-point. The present illustration also shows that this degeneration may extend also to the central portions of the cerebrum, and secondarily as far as the medulla oblongata. In this case an amputation performed forty years before, in which the arm was removed, had caused a paralysis of the leg on the same side. This remarkable result, it is seen, was a remote one, and only appeared towards the end of the patient's life. The autopsy showed an atrophy of the cells, and some of the nervous fibres which preside over movements of the leg, an atrophy which apparently had been very slowly and gradually established.

The case, in brief, was that of an old soldier, who had submitted forty years before to a disarticulation of the left arm, and who died suddenly with cerebral congestion. Up to this time he had never experienced any cerebral disorder; but during the last years of his life the lower extremity on the same side as the amputated arm was gradually becoming paralyzed. At the examination of the brain, on the right side there was noticed a decided depression of the ascending frontal convolution. This was also observed in the paracentral lobule and the convexity of the right hemisphere. The lateral ventricle of the same side was considerably enlarged, especially at the level of the affected convolution, denoting a very extensive atrophy of the subjacent white substance. The corpus striatum also presented a depression near its centre, and the optic thalamus was flattened. Sections of the medulla oblongata showed that the median raphé was deviated to the right, and very markedly atrophied. Upon carefully weighing the hemispheres, the right was found to be thirty-one grammes less than the left.—*Revue de Thérapeutique Méd-Chir.*, No. 11.

RESORCINE IN THE TREATMENT OF PURULENT VAGINITIS.—The recent introduction of resorcine into therapeutics has developed some properties which render it especially applicable for external use. Chéron has employed it with success in the treatment of vaginitis purulenta, in both the acute and chronic stage. When there is much tenderness, so that a speculum cannot be introduced, a soft catheter or tube is pushed in, and irrigations of from six to ten minutes' duration are practised three times a day of the following:

℞ Resorcin., 10;
Aquæ fortis, 1000.—M.

As a result, the purulent discharge is rapidly reduced, and the soreness subsides, so that a modification of the treatment may be made. He then applies

℞ Resorcin., 6;
Amyli glycerit., 60.—M.

This is to be carried to the bottom of the vagina, with the aid of the speculum, upon a tampon of cotton-wool, which is allowed to remain in place for from twelve hours to fifteen hours. The dressing is repeated every second day. Cure is thus obtained more rapidly than with the ordinary emollients and astringents.—*Le Progrès Médical; Revue Méd.-Chir. des Maladies des Femmes.*

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PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, JULY 14, 1883.

EDITORIAL.

REGISTRATION LAWS AND THEIR OPERATION.

THE practical benefits derived from an enactment will depend quite as much upon the spirit with which it is enforced, as upon the letter of the law itself. Registration laws primarily intended for the protection of the profession seem particularly liable to fall short of their intended objects, not so much because of defective construction as of unfaithful interpretation; indeed, unless definite and comprehensive in expression, and fully sustained by public opinion, they may be made in practice to sanction and perpetuate the very evils they were intended to correct. It has been more than once asserted, by those fully qualified to judge, that in the neighboring State of New York the medical profession has really lost by the Registration Act more than it has gained. At the last meeting of the State Society of New York, it was mentioned as a fact, by one of the members, that an Indian medicine-man had driven into Rochester in war-paint and feathers, though engaged in the peaceful arts of selling patent medicine, and, having gone to the Prothonotary's office and paid the registration-fee, he had obtained a certificate as a physician, with full authority to practise under the law.

That this is not an isolated instance has been shown by the recent arrest of a Dr. Hale, a travelling lecturer in Cleveland, on the charge of circulating obscene literature. In the progress of the examination of this case, as we learn from the public press,* he presented, as his authority to practise medicine, a certificate from a certain county in the State of New York, allowing him to practise medicine in that State.

He had no diploma, and apparently no other credentials or qualifications for the practice of medicine. This man, who is a peripatetic popular lecturer upon sexual topics, had been arrested in Wheeling, West Virginia, by the prompt action of the efficient and active Secretary of the State Board of Health, Dr. Reeves; being driven from there, he next went to Toledo, whence he fled, followed by a warrant for publishing obscene literature, for which he was finally arrested in Cleveland, Ohio, where he was about to give a public lecture.

Much disappointment has been expressed by physicians in Pennsylvania, as well as in New York, at the operation of the Registration Act, it being claimed that the practical result is that, instead of elevating the profession above irregulars and charlatans, it has degraded the regular practitioner to the level of any one who can register under the Act, however unworthy he may be to be in the ranks of the medical profession. It seems more than absurd that a physician may commit a crime that will render him in the eyes of the law unworthy to exercise the franchise of a freeman at the polls, and yet no bar exist to his continuing in practice, and no means provided to annul or deprive him of the diploma he has dishonored.

That benefit may accrue from the Registration Act is evident from the following instance in which justice did not miscarry. A trial has just been concluded at Wilkesbarre, in this State, in which a "Dr." Taylor was duly convicted of practising without being a graduate in medicine of a chartered institution authorized to grant diplomas, and also of perjury, in swearing that he had been in the continuous practice of medicine since the year 1881. A motion for arrest of judgment having been entered, Judge Woodward refused a new trial, and

* Wheeling Register, June 28, 1883.

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decided that the Registration Act, the constitutionality of which had been called in question, is not an *ex post facto* law, but in all respects a valid and constitutional statute. The motions in arrest of judgment and for a new trial were denied, and the prisoner was remanded for sentence.

The physicians of Luzerne County are to be congratulated upon their success in this test case, and it is to be hoped that it may be the precursor of many similar prosecutions to be instituted against transgressors of the law, less distant from this city.

EDUCATION OF CHILDREN.

WE have been perusing with much pleasure the small book recently published by Dr. Henry Putnam Stearns upon Insanity, its Causes and Prevention,* and we can heartily recommend it to our readers, and especially to all persons who have care of children with sensitive and feeble nervous organizations. It seems to us very clear that in the modern system of perpetual examinations, and especially of competitive examinations, there lurks a very serious danger. All education should have for its object the training and development of the mind, rather than the acquisition of facts; whereas very often, if not usually, in competitive examinations it is the amount of facts crowded into the mind at the time of examination which is the basis of judgment. Over-ambition finds its victims especially in those children with sensitive, feeble, nervous systems, not only because such children cannot resist strain, but largely because such children morbidly desire to excel in their classes; to the powerful, vigorous boy the play-field is vastly more attractive than is the school-room, and his desire to overleap others finds its natural vent in athletics rather than in mnemonics.

The tendency to teach children many things imperfectly rather than a few things perfectly is often but too apparent in our schools. Another more serious error, which is closely connected with many studies and long hours, is the teaching children to dawdle over the books. It is the exceptional man who will stand more than four or five hours a day of intense mental application; and yet the pulpy brain of the child is kept fuming over the books this length of time in school and two or three hours more out of school. Of course the attention does not remain fixed: the dawdling which results is nature's safeguard against ruin. Four hours a day for a child of fourteen years is sufficient; but the attention should during this time be kept fixed upon the subject, and the habit of close study thus acquired will be far more valuable than the primary knowledge taken into the brain. Short hours and intense application to a few studies are the foundation of an ideal school. To carry it out it is necessary that the classes be small enough for personal instruction.

In large classes mental habits are formed outside of the control of the teacher; the mind grows rather than is trained. If it be naturally strong and vigorous, it may grow nobly; if it be naturally crooked and distorted, or feeble and stunted, it grows into a more and more fixed crookedness, or sickens into perpetual dwarfhood, or perhaps dies out altogether.

* New York, G. P. Putnam's Sons, 1883.

AMBULANCE-SERVICE IN PHILADELPHIA.

THE Committee on Medical Charities of the Philadelphia Society for Organizing Charity announced at a recent meeting that steps had been taken to supply all the police-stations with hand-ambulance wagons, and before very long every station-house will be supplied; in some of the stations they have been already in active use for nearly two years. They recommend that four should be placed in the Park,

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where they will be accessible in case of accident, in addition to the horse-ambulance already stationed at Belmont. From the report of the committee we quote the following, with full approval:

"Although at the inception of this movement there were but two horse-ambulances in existence in this city, several of the hospitals have since provided them, or are taking measures to do so, in order to place themselves in correspondence with the new system. The horse-ambulances available for general purposes are now eight in number, omitting the two ambulances employed by the Board of Health for the Municipal or Smallpox Hospital, and also the Park ambulance. These hospitals are so distributed throughout the city as to admit of a convenient division into districts. There are but four general hospitals remaining that are without horse-ambulances. The additional expense which such an establishment entails is a serious embarrassment to the management of those hospitals which already have them, and prevents the others from making a similar provision. The committee therefore recommend that the city should annually make appropriations for the maintenance of the ambulance-establishment in the several hospitals. It is estimated that this would call for the expenditure on the present basis of between five and six thousand dollars, and, if made, would secure an equal administration of the service throughout the city. Brooklyn and other cities assume the entire support of the ambulance-service, and it would seem a most reasonable claim upon the city that it should incur the expense involved in the conveyance of persons at the instance of the police or other public officials to hospitals which thereby have thrown upon them the subsequent support and care of the individual. Where the conditions of suffering are so peculiarly urgent, humanitarian considerations strongly point to the importance of this measure, and demand that the administration of the ambulance-service should not depend upon an uncertain or precarious support."

CORRESPONDENCE.

LETTER FROM THE ORIENT.

TOKIO, JAPAN, May 28, 1883.

THE new press regulations, which require the deposit of one thousand yen (about $750) to be made by each periodical, besides imposing some severe restrictions upon all publications, have, I understand, from statements in the *Japan Mail* and other papers, led to the discontinuance of a number of scientific sheets, as well as many of a political nature, at whose existence these rules have been aimed. Among those it is proposed to discontinue, I notice two medical journals,—one devoted to Chinese and Japanese medical practice, and one to Western medical science. It is to be regretted that these regulations should have been made to apply to journals of so purely a scientific character, and it is sincerely to be hoped that our contemporaries may be enabled to extricate themselves from the unpleasant position. One of these journals has quite a large circulation, has reached its two hundred and sixty-eighth weekly issue, and consists of some thirty-six pages of very readable matter. The following is the table of contents of Number 268: Official Report of the Home Department, No. 8; Sea-Bathing in Japanese Waters; Bacteria; A Chronic Case of Skin Burning; Relation between the Doses of Medicines and Results of Treatment; Why there are so Many Cases of Stricture of the Œsophagus in the Province of Yamato; Miscellany; Reports of the National Sanitary Board.

Western medical science seems to be gaining ground here, if we may judge from a late statistical medical report, which gives the number of physicians who have passed satisfactory examinations in medicine and surgery at 1625; those who have not undergone such examinations, 769; those who have pursued their profession from the time when there was no system of examination, 30,700; oculists, 502; surgeon-dentists, 124; accoucheurs, 417; bone-setters, 86; licensed apothecaries, 415; those who have been in practice from the time when there were no license regulations, 6426; government principal hospitals, 3,—branches, 19; public principal hospitals, 192,—branches, 40; private principal hospitals, 202,—branches, 11. It will be seen from the above that by far the larger number of practising physicians are still unlicensed, and probably practise according to the old Chinese system. It must be borne in mind, however, that the regulations requiring physicians to pass an examination in anatomy, physiology, materia medica, pathology, practice of medicine and surgery, and obstetrics, and to take out licenses to practise, only came into vogue a few years since, and did not affect those already in practice for three or four years.

Medical schools are now increasing in number, and consequently the number of students educated in Western medical sciences. The last annual report of the Medical Department of the University of Tokio shows the actual number of students as follows: medical students, 169 (course conducted by German professors); those following the same course in the Japanese language, 760; pharmaceutical students, 71; making a total of 1000. The number of graduates was as follows: medicine, 31 (German course); course in the Japanese language, 171; pharmacy, 133. At the same time there were abroad in foreign countries 94 students of medicine and 32 of pharmacy, mostly in Germany.

Among the private schools of medicine, that of Dr. Hasekawa, at Fukagawa, established in 1876, seems to be most numerously attended. The number of students since its establishment has been 2378; the number in attendance at present is 526, about 70 of which number annually obtain permission from the home office to practise. In this

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school a dissecting-room has been open since the beginning of the present year. There are several smaller schools in various parts of the empire, but their combined output is not sufficient—nor will it be for some years to come—to meet the demand for well-trained physicians, which will be seen from the proportion of licensed and unlicensed physicians to the population given below.

The total population, January 1, 1882, was 36,700,118, of which 18,598,998 were males, and 18,101,120 were females, which gives only one licensed physician to about every 22,000 of population, and one unlicensed to every 1200; or, one physician, licensed or unlicensed, to every 1109.

DANGEROUS SODA-WATER.

{ Analytical Laboratory, 198 Penn Street,
{ Pittsburg, Pennsylvania, June 22, 1883.

Editor Philadelphia Medical Times:

Dear Sir,—The other day I walked into a drug-store in Pittsburg, and was soon engaged in conversation with the druggist. "My soda-water has a strange taste," observed the pharmacopolist. He drew a little of the water, and I tasted it. I then requested him to put up half a pint of it in a clean bottle, and told him that I would take it to my laboratory and examine it. This I have done; and I find the water to be dangerously impregnated with copper,—in proof of which I enclose a small piece of iron heavily coated with *metallic copper*, which coating was derived from only *two fluidounces* of the soda-water. The copper no doubt existed in this water as carbonate of copper, held in solution by excess of carbonic acid, and was doubtless derived from the saturators, which are in all cases made of that metal, and, I believe, generally coated inside with tin. By and by, however, the *tin* gets dissolved (as carbonate held in solution in excess of carbonic acid), and *then* (if not before) the copper is exposed. I say nothing about tin here, as I have not examined for it. It has frequently occurred to me that in every large city there should be a public analyst, whose business it would be to examine solids and liquids used as foods, in the interests of public health. But why do I make such a suggestion? To judge from other appointments, the situation would be given to some political bummer, some cheap incompetent, some school-boy fresh from some miserable college, some pedagogue mouthing chemistry from a book, some donkey compared with which Balaam's was an ass of genius, some old soldier with a wooden arm or perhaps with even a wooden head, or something else equally ridiculous.

I am, sir, yours faithfully,

George Hay, M.D., etc.,
Chemist.

PROCEEDINGS OF SOCIETIES.

THE AMERICAN NEUROLOGICAL ASSOCIATION.

The ninth annual meeting of the American Neurological Association was held in New York City June 20, 21, and 22, 1883, with two sessions each day, afternoon and evening. Dr. T. R. Edes, of Boston, President of the Society, occupied the chair.

THE PRESIDENT'S ADDRESS.

In his address at the opening of the session Dr. Edes discussed recent progress in neurophysiology, and more especially the advances in the theories of cerebral localization in their relation to clinical medicine and therapeutics. He declared that the clinician often does not sufficiently distinguish between the symptomatology of functional and organic disorder of the nerve-centres, and consequently cases are reported as instances of organic disease cured by treatment, although they may really have been instances simply of functional disorder. On the other hand, he claimed that pathologists are too apt to regard the changes discovered in post-mortem examination as existing throughout the course of the disease, whereas they are gradual and progressive, and are often preceded by a period of purely functional disorder.

The death of Dr. Beard was alluded to, and a letter was read from Dr. E. Seguin, now in Zurich, regretting his inability to perform his duties as Secretary, and asking to be relieved of them.

Dr. R. W. Amidon, of New York, was appointed Secretary *pro tem.*

The Council recommending the following candidates, Drs. Leonard Weber, of New York, G. L. Walton, of Boston, and J. T. Eskridge, of Philadelphia, they were unanimously elected to active membership in the Association.

A ballot for officers was held, with the following result:

OFFICERS FOR 1883–84.

President.—Dr. Isaac Ott, of Easton, Pa.

Vice-President.—Dr. W. R. Birdsall, of New York.

Secretary and Treasurer.—Dr. R. W. Amidon, of New York.

Members of Council.—Drs. V. P. Gibney and W. J. Morton, of New York.

OBITUARY NOTICE.

On motion, a minute was directed to be made of the death of Dr. George M. Beard, Drs. C. L. Dana and C. K. Mills being appointed by the chair to prepare it.

TRAUMATIC NEURITIS OF THE ARM.

Dr. W. J. Morton, of New York, reported a case of a man, 65 years of age, who, after a

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NEW REMEDIES.

DIAPHORETICS.

PARKE, DAVIS & CO.,

Manufacturing Chemists,

DETROIT, MICH.

The remedies whose action is directly diaphoretic are so few that any additions to those which have heretofore been classified as possessing this property are of more comparative value than additions under the other heads covering the classification of drugs. This poverty of diaphoretics is the most convincing argument for a thorough trial of such of the following drugs as have not as yet become thoroughly known.

JABORANDI.

(Pilocarpus Pennatifolius.)

This Brazilian drug, though but a comparatively recent introduction to the materia medica, is already so well known as to render a consideration of its properties scarcely less necessary than would be a consideration of those of opium or any of the other standard drugs. It is, *par excellence*, the diaphoretic of the materia medica. We desire more especially in this place to ask attention to our preparations of it —the fluid and the solid extracts. We vouch for the conformity of these to the recognized standard of active principle. Our experience in the matter of new drugs has taught us the necessity of unusual care in the selection of the crude drug for pharmaceutical preparations. The liability to deception in these is, through the limited familiarity with their peculiarities on the part of both physicians and pharmacists, incomparably greater than in the case of old and standard drugs, and the newer introductions to the materia medica have not infrequently been made to suffer disrepute through this cause. In the case of Jaborandi, as in that of all the other newer remedies, the specification ("P., D. & Co.") on the physician's prescription will insure a preparation of full physiological activity.

SIERRA SALVIA.

(Artemisia Frigida.)

Although this drug is also classified as a diuretic, it is likewise, in conformity to a well-known physiological law, when the surface is kept warm, a diaphoretic. Illustrations of this dual action of drugs are furnished in the case of other diaphoretics, as, for instance, sweet spirit of nitre, etc., which act on the kidneys or the skin accordingly as the latter is kept warm or cool. Given in the form of a warm infusion, and with the patient's surface kept properly warm, Sierra Salvia is an active diaphoretic, and is especially indicated in the case of the eruptive fevers. Its diaphoretic action is notably more decided than that of any of the warm vegetable infusions popularly employed.

ELEPHANT'S FOOT.

(Elephantopus Tomentosus.)

Elephantopus Tomentosus is a drug of whose direct diaphoretic properties we are not yet fully assured by any considerable number of reports. We submit it on the authority of Dr. Newlon, of Kansas, who speaks warmly in its behalf. We solicit for it that thorough trial which is necessary to fix its place in the materia medica.

DETROIT, MICHIGAN. { PARKE, DAVIS & CO., MANUFACTURING CHEMISTS. } New York: 60 Maiden Lane and 21 Liberty St.

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BOUDAULT'S PEPSINE.

The only Pepsine used in the Hospitals of Paris for the last 30 years.

Unlike the various substitutes which, in some cases, are but unscientific or incompatible compounds, forced upon the Medical Profession as aids to digestion by extensive advertising, but which, when submitted to the proper tests, are found to be almost useless as digestive agents, Pepsine is constantly gaining in the esteem of the careful practitioner.

Since the introduction of Pepsine by Boudault and Corvisart in 1854, the original BOUDAULT'S PEPSINE HAS BEEN AT ALL TIMES CONSIDERED THE BEST, as is attested by the awards it has received at the Expositions of 1867, 1868, 1872, 1873, in 1876 at the Centennial Exposition of Philadelphia, and in 1878 at the Paris Exposition.

The most reliable tests, carefully applied, will satisfy every one that BOUDAULT'S PEPSINE HAS A MUCH HIGHER DIGESTIVE POWER than the best Pepsines now before the Profession, and is therefore especially worthy of their attention.

With a view of bringing this important remedy within the reach of all, *the price has been materially reduced.* It is now not only the best, but comparatively the cheapest.

In answer to frequent calls, another preparation is now offered,

BOUDAULT'S SACCHARATED PEPSINE,

having the same high digestive power as the amylaceous; it will be sent only when specified.

Boudault's Pepsine is sold in bottles of 1 ounce, with a measure containing exactly 5 grains; also in bottles of 4, 8, and 16 ounces for dispensing.

Boudault's Saccharated Pepsine is sold in bottles of 1, 4, 8, and 16 ounces for dispensing.

Besides Boudault's Pepsine in powder, we offer also

BOUDAULT'S WINE OF PEPSINE.

In this preparation the taste of Pepsine being perfectly disguised, it may be recommended to persons who have difficulty in taking Pepsine in the form of powder.

DR. RABUTEAU'S

(Laureate of the Institute of France)

DRAGEES, ELIXIR, AND SYRUP OF IRON.

"The experiments made in the hospitals of Paris have demonstrated that *Dr. Rabuteau's Dragees, Elixir, and Syrup* regenerate the red globules of the blood with a rapidity never observed with the use of the other ferruginous preparations. These results have been proved by the various *Compt-Globules*.

"The ferruginous preparations of *Dr. Rabuteau* do not cause any constipation, and are perfectly tolerated by the weakest persons."—*Gazette des Hôpitaux.*

Dr. Rabuteau's Elixir is prescribed when some difficulty is experienced in swallowing the Dragees; it is especially adapted to weak persons whose digestive functions need strengthening or stimulating.

Dr. Rabuteau's Syrup is especially prepared for children, who take it readily because of its agreeable taste.

A sample of Rabuteau's Dragees will be sent free to any physician mentioning THE MEDICAL TIMES.

Prepared by CLIN & CO., Pharmacists, Paris. E. FOUGERA & CO., Agents for the United States.

TANRET'S PELLETIERINE

FOR THE TREATMENT OF TAPE-WORM (TÆNIA SOLIUM).

This New Tæniafuge, the active alkaloid of Pomegranate Bark, has of late come into extensive use in France for the treatment of Tape-Worm (Tænia Solium). The results of numerous experiments with it at the Marine Hospitals of Toulon, St. Mandrier, etc., and in the Hospitals of Paris, St. Antoine, La Charité, Necker, Beaujon, etc., have all been most satisfactory. Dr. Dujardin-Beaumetz, Member of the Academy of Medicine, and Prof. Laboulbène, in their report to the Society of Therapeutics, have given it their unqualified approval after the most searching experiments. This preparation is pleasant to administer, and, if certain preliminaries are observed, success will be insured. Pelletierine is prepared by

M. CHAS. TANRET, Pharmacien de 1re Classe, 64, Rue Basse du Rempart, Paris.

DUCRO'S ALIMENTARY ELIXIR,

A COMBINATION UNITING THE PROPERTIES OF

ALCOHOLIC STIMULANTS AND RAW MEAT.

This preparation, which has been used with great success in the hospitals of Paris since 1868, is adapted to the treatment of all diseases requiring the administration, in a small volume, of a tonic able to stimulate and support the vital forces, as *Pulmonary Phthisis, Depression and Nervous Debility, Adynamia, Malarious Cachexia, etc.*

Prepared by EMILE DURIEZ & CO., Successors to DUCRO & CIE., Paris.

Agents for the United States, E. FOUGERA & CO., NEW YORK.

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dislocation of his shoulder had been reduced, presented a peculiar condition of the hand. There was decided pain and swelling of the wrist and hand, with lowering of temperature; the skin was smooth, glazed, and mottled; there was more or less œdema; the nails were curved, the finger-ends clubbed; movement was painful and very much impaired; there was an exaggeration of tactile sense, and diminished temperature-sense; the electrical response was altered, and approached the reaction of degeneration in the right forearm. About ten months after the appearance of the symptoms a similar series of phenomena appeared on the left side, though to a much less degree. The case was regarded as one of injury to the right brachial plexus, caused by direct injury to the shoulder, followed by motor and sensory disturbance below, and also by an ascending neuritis, which subsequently led to the changes upon the opposite side. The symptoms that were peculiar in this case were the fibrous hyperplasia, and, secondly, the increased reflex excitability. Dr. Morton concluded, therefore, that neuromuscular hyper-excitability may exist as a symptom of ascending neuritis when this has extended to the spinal centres.

This peculiar condition had been discovered by Charcot in cases of hypnotism, but had never before been reported as a phenomenon of traumatism of peripheral nerves. Dr. Morton then presented the patient, who was examined with general interest. The treatment had been by blistering along the course of the nerves, and the hot and cold douche, with the internal administration of cod-liver oil, with marked benefit.

In the discussion upon the case the explanation of Dr. Morton was accepted, and other cases of traumatic neuritis referred to. In the treatment Dr. Hammond insisted upon physiological rest for the inflamed nerve, and to obtain this he had practised nerve-stretching. Dr. Putnam, of Boston, recommended the ice-poultice, kept on continuously for many hours in succession, the precaution being taken not to freeze the skin, by placing a piece of flannel on its surface.

HYDROBROMIC ACID AND THE BROMIDES.

Dr. C. L. Dana read a communication entitled a "Note on Hydrobromic Acid as a Substitute for the Bromides." Dr. Dana claimed that the officinal ten-per-cent. solution of hydrobromic acid is an efficient substitute for the alkaline bromides in *insomnia*, but it should be given in doses much larger than those usually employed. He had found that very satisfactory results could be obtained from drachm doses of the officinal dilute solution. The bromides may be substituted by the acid in all the milder disorders for which they have been used. Especially in cases requiring vascular and nervous sedation is the acid serviceable, and he had used it in a number of cases with benefit. In *epilepsy* some patients had been markedly improved by drachm doses four or five times a day; others had not received any good from its use. In *chorea* and *alcoholism* it had proved an adjunct to other treatment. It is a good solvent of quinine, but Dr. Dana stated that, contrary to the usual belief, it does not prevent cinchonism.

Dr. Hammond, in discussing the paper, said that after several years' experience he had abandoned the use of this agent because of its inferiority to the bromides: he was satisfied, however, that it really does possess the power of preventing the unpleasant nervous effects of quinine.

Dr. Eskridge confirmed the statement that cinchonism is controlled by hydrobromic acid: he also recommended its use in typhoid conditions to relieve insomnia.

PECULIAR SYMPTOMS OF LEAD-POISONING.

Dr. J. J. Putnam, of Boston, read a paper entitled "Lead-Poisoning simulating other Forms of Disease," in which he also directed attention to a source of error in examining the urine for lead from the similar reaction produced by bismuth.

He insisted upon the importance of a routine examination of the urine in all cases of suspected lead-poisoning, even when the symptoms may appear to indicate other disease.

After referring to a case in which the nervous phenomena appeared to indicate the presence of *lateral sclerosis*, reported by Dr. Minot (in which lead was found in the urine, and the patient recovered after the administration of iodide of potassium), he gave the details of eight cases which had come under his notice, where the symptoms had not been characteristic of lead-poisoning, but lead had been detected in the urine, and upon the urinary analysis the diagnosis had been made. He referred particularly to cases of nervous disorders presenting symptoms of disease of the spinal cord, dyspepsia, lithæmia, and chronic nephritis, which were found to be due to lead-poisoning. Under the head of lead-encephalopathy, a number of nervous symptoms have been described, among which the most prominent are delirium, mania, dementia, epilepsy, and coma, but there are doubtless a large number of less clearly defined phenomena which are attributable to this cause.

He recommended the administration of potassium iodide for several days prior to the urinary examination, and directed that at least one quart of urine should be employed for the analysis. From personal experiment he had found that bismuth will respond equally well to the tests usually employed, and he declared that traces of bismuth may still be detected in the urine several weeks after its administration by the mouth.

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A URINAL FOR WOMEN.

Dr. Putnam also exhibited a copper cup of appropriate shape, having an inferior attachment to rubber tubing, so as to convey its contents to any desired receptacle. The apparatus was intended to be used as a urinal by female patients while sitting in a chair.

A CASE OF GENERAL NEURALGIA.

Dr. J. T. Eskridge, of Philadelphia, reported the following interesting case of nerve-disorder. A German, 29 years of age, free from venereal or inherited taint (father died of acute spinal disorder), a laborer in a foundry, came to St. Mary's Hospital, January 15, 1883, with the following history. He had had three healthy children, and had been usually in good health until 1873, when he had an attack of pneumonia and was in bed four weeks. Subsequently he was well until two years ago, when he caught cold from sleeping in a damp bed. He then had a dull aching pain in the spine, with sciatica on the left side, but he managed to keep at his work in the foundry. In October, 1881, he accidentally burned his left foot superficially with hot iron, which confined him in bed in a hospital for ten weeks; after this rest he returned to his work, comparatively free from pain, but the pain returned shortly afterwards in the left leg and ankle, which progressively increased until it obliged him to return to the hospital, in October, 1882. He again improved for a time, but the symptoms returned after he resumed his work, so that in January, 1883, he was scarcely able to walk, and he came to the hospital, complaining of great pain in the leg and back. There was tenderness along the spine in the dorsal and lumbar regions, extending down the nerve-trunks in the left leg, which were also the site of intense neuralgic pain. The right leg remained normal, but double intercostal neuralgia soon appeared and became constant. Alternating hot and cold applications to the spine and along the left sciatic gave great relief. The patient slowly improved under general treatment. Most of the large superficial nerves, except the fifth nerve, were painful upon pressure. The case was pronounced one of general neuralgia, in preference to the view of its being a neuritis consequent upon spinal meningitis.

LOCOMOTOR ATAXIA AND GENERAL PARALYSIS.

A case of locomotor ataxia, terminating in general paralysis, was reported by Dr. Charles K. Mills, of Philadelphia. The man was 47 years of age, of good constitution, and had been under treatment for three years for so-called rheumatic pains. There was a history of chancre without sequential phenomena, and also of venereal excess and intemperance. Ataxic symptoms were well marked. Two years later the *délires des grandeurs* gradually appeared, and he finally died in a hospital for the insane. The autopsy revealed opacity of the pia mater, with congestion and adhesions; there was marked decortication and atrophy of the cerebral convolutions. The pia of the cerebellum was likewise deeply congested and adherent, especially over the superior vermiform process; the pia of the cord was also thickened, and the cord itself shrunken and irregular on its surface. Sclerosis of the posterior columns was present throughout the extent of the spinal cord; it also extended to the pons, crura cerebelli, optic thalami, and in the cerebral convolutions, and into the cerebellum. There was also general meningitis of the pia mater.

Dr. Mills, in conclusion, referred to a number of other cases illustrating a relation between posterior sclerosis and general paralysis of the insane, reported by Obersteiner, Hamilton, Plaxson, Meckel, and others.

In the discussion similar cases were mentioned by Dr. Shaw and Dr. Webber.

SYMPTOMS OF PARETIC DEMENTIA.

Dr. E. C. Spitzka, of New York, presented some remarks on the supposed relation of speech-disturbance and the patellar tendon reflex in paretic dementia. In a former paper Dr. Shaw had pointed out a possible connection between exaggerated reflex and speech-disorder in general paralysis. The lecturer detected a source of error in an associated pathological condition of the brain. In paralytic dementia there is, as the rule, a diffuse disorder of the entire cerebro-spinal axis, the lesion being in different cases concentrated in the cord, in the cortex, and in the isthmus. A speech-disturbance may be due to a high cortical lesion, and be permanent, or it may be connected with vaso-motor disturbance and be evanescent, just as in cerebral or meningeal hemorrhages speech may be permanently or temporarily affected. Speech-disorder may also be connected with lesions of the medulla oblongata. The presumption is that the exaggerated tendon reflex may be due to associated changes, since in a large number of cases no direct connection could be shown to exist.

Dr. Shaw, in reply, disavowed any intention of attempting to connect the spinal cord with the speech-centre, as implied in the paper just read. His paper had considered the condition of the tendon reflex in paretic dementia, and of seventy cases twenty-two exhibited an exaggeration. He merely wished to put these results of clinical observation on record, without discussing the pathology.

Second Day's Proceedings.

MENTAL LABOR AND THE EXCRETION OF PHOSPHORUS.

The President, Dr. Edes, read a paper on the "Excretion of the Phosphites and Phos-

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phoric Acid as connected with Mental Labor." From a number of physiological experiments which he had made upon himself, he was unable to detect any increase of phosphorus-excretion after brain-work; indeed, if anything there was a decrease. He concluded that the value of phosphorus as a remedy for mental fatigue or overwork must rest upon a clinical rather than a chemical basis.

UNUSUAL SYMPTOMS OF LOCOMOTOR ATAXIA.

Some cases of locomotor ataxia were reported by Dr. S. G. Webber, of Boston, which were considered interesting on account of unusual symptoms and marked remissions. The first case had simply gastric crises, which were very severe, but they had none of the other ordinary characteristic features of ataxia. The second had only a peculiar dyspnœa, due to exaggeration of the girdle sensation. Diabetes, and deafness, sometimes unilateral, were present in other patients.

In another case there had been an entire remission of the symptoms for three years, and he regarded the case as virtually cured. He believed it reasonable to think that when the ataxic symptoms develop rapidly, the prognosis is more favorable than in the other class of cases.

Dr. Jewell, of Chicago, in discussing the paper, insisted upon the necessity of absolute rest in bed for months in locomotor ataxia, with massage and passive exercise to keep the muscles in good condition.

PRESENTATION OF INTERESTING CASES OF NERVOUS DISEASE.

Dr. R. W. Amidon presented a boy suffering with tetanoid paraplegia, the symptoms being preceded by indications of subacute hydrocephalus. He inquired if the tetanoid symptoms might not be due to secondary changes in the cord, due to extension of the cerebral disease downwards. The pathology of the case was quite obscure.

Dr. Amidon also presented two cases of paralysis agitans, in which tremor was entirely absent.

Dr. V. P. Gibney, of New York, showed two cases of progressive muscular atrophy, and one with atrophy and fibrillary twitchings following gunshot wound.

DEVICE FOR WRITER'S CRAMP.

After a brief reference to some of the forms of apparatus devised for writer's cramp, Dr. Morton, of New York, explained his modification of Nussbaum's method of treatment, and showed a thimble penholder, the thimble being sufficiently long to cover the entire index finger. By thus enforcing extension and preventing flexion, much amelioration had been derived in his experience.

Third Day's Proceedings.

CASE ILLUSTRATING RESTORATION IN LOCOMOTOR ATAXIA.

Dr. G. A. Hammond presented a patient, 47 years of age, in whom, after presenting ataxic symptoms, with characteristic pains and absent patellar tendon reflex, there had been a return of this phenomenon, and every other symptom of the disease had disappeared. There was a history of syphilitic infection without subsequent symptoms. The treatment had been by potassium iodide, electricity, and the usual measures.

Dr. William A. Hammond corroborated the diagnosis in this case.

NUTRITIVE CHANGES FROM NERVE-LESIONS.

Dr. Miles, of Baltimore, reported an interesting case of nutritive changes in the hand from pressure of a dislocated humerus upon the brachial plexus. There was great deformity, glossy skin, loss of power, insensibility, which had all developed gradually after dislocation of the head of the humerus into the axilla, indicating the presence of neuritis.

COMPARATIVE CEREBRAL ANATOMY.

Dr. B. G. Wilder, of Ithaca, New York, read a brief description of the brain of a cat, in which there was complete absence of the corpus callosum, and exhibited a number of photographs. He also read a paper "On the Alleged Homology of the Carnivoral Fissura Cruciata with the Primatial Fissura Centralis."

Referring to the assumption of T. Lauder Brunton (*Brain*, January, 1882) "that these fissures correspond," Prof. Wilder made the following suggestions:

First. Writers should specify whether by correspondence they mean *analogy* or *homology*, as a relation based upon the position of a fissure based its location among experimentally-determined "motor areas," or a relation implying identity as determined by embryology and comparative anatomy.

Second. The present disagreement of competent authorities respecting the homology of these two fissures should restrain both physiologists and zoologists from assuming the correctness of any particular view; for example, the human centralis has been homologized with not only the cruciate, but the superorbitalis, the coronalis, and the ansata, together with the coronalis (in connection with the last idea was shown a fœtal human brain exhibiting the somewhat rare condition of an interruption of the centralis); the cruciate has been homologized with not only the centralis, but with the first frontal, the calloso-marginalis, and the occipito-parietal; *i.e.*, the surest method of determining the true homology seems to be the one which is outlined in Wilder and Gage's "Anatomical Technology," to make careful and extended com-

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parison between the brains, especially fœtal specimens, of man, monkeys, and the *lemurs* on the one hand, with those of cats, dogs, and seals on the other.

The lemurs are primates with some characters of the carnivora, while the seals, though carnivora, have the occipital lobe and the post cornu of the procœlia (cornu posterius of the ventriculus lateralis).

THE TREATMENT OF MIGRAINE.

Dr. W. J. Morton read a paper upon the treatment of migraine. Adopting the hypothesis of Du-Bois Reymond that migraine is due to a contraction or tetanic state of the blood-vessels of the affected side, he claimed that this "vaso-motor theory" affords a definite working basis for the practical treatment of the disease in which clinical observation and physiological experiment are in complete accord. The best evidence seems to point to the cervical sympathetic or its corresponding spinal centre as the cause of the vaso-motor disturbance and the site of the disease. As one or the other is affected, cases will be of the angeio-spastic or angeio-paralytic type of the affection, the former being more common. The treatment is based upon the type of the disease. In the *spastic*, sodium bromide is very serviceable, continued, if need be, for months. Cod-liver oil and iron may also be given conjointly. Both glonoin and nitrite of amyl also are useful. In the *paralytic* type, on the other hand, strychnia, ergot, and electricity are most serviceable.

In the discussion, Dr. Hammond suggested the surface thermometer as a means of diagnosticating the two types. Drs. Mills and Dana could not endorse the views so positively put forth.

SYPHILIS AND LOCOMOTOR ATAXIA.

Dr. W. R. Birdsall, of New York, read a paper in which he presented statistics with reference to the relation between syphilis and locomotor ataxia. He had collected five hundred and twenty-five cases of locomotor ataxia, of which two hundred and twenty-five had syphilis (forty-three per cent.). The cases were from Rosenthal, Bernhardt, Remak, Westphal, Pusinelli, Gowers, Fournier, Erb, together with forty-two which had come under his own observation. There was a marked difference in the percentage of syphilis in the cases reported by different observers. For instance, Erb, in one hundred cases, reports syphilis present in eighty-eight per cent., while in his own cases (forty-two) only four per cent. of the patients had syphilis. Probably the differences were due to accidental relations.

EXHIBITION OF APPARATUS.

An improved hand-electrode, for making careful tests of the electrical condition of tissues, was exhibited by Dr. Birdsall. By an ingenious arrangement the current could be interrupted and reversed at the same time while the electrode was being employed in making the examination.

READ BY TITLE.

A paper sent by Dr. H. D. Schmidt, of New Orleans, on the "Pathological Anatomy of the Cerebro-Spinal Axis of a Case of Chronic Myelitis of Nineteen Years' Standing," was read by title, and referred.

GALVANIZATION OF THE BRAIN IN CHOREA.

Dr. C. L. Dana, of New York, read a "Note on the Treatment of Chorea by the Sedative Galvanization of the Brain." He reported eight cases of anodal cerebral galvanization; the patients all recovered. He claimed it as a valuable adjunct to the treatment of chorea, and said that it may be combined with advantage with the internal administration of arsenic. The method of application is as follows. A large sponge-electrode of flexible brass, four by two inches, is thoroughly moistened with salt water. The hair of the patient is also thoroughly wetted, and the electrode applied over the side of the head above the ear. In hemichorea it need only be applied over the side opposite to the one affected. The other electrode is placed in the hand of the affected side. The electrode upon the scalp is made positive, and a current, three to six Stohrer's, four to eight Daniell's cells, is passed for from three to five minutes. The electricity should be applied daily for at least ten days. If after that time there is no improvement, other treatment may be instituted.

THE REMOVAL AND PRESERVATION OF THE HUMAN BRAIN.

Dr. Burt G. Wilder read a paper insisting upon the importance of careful removal of the brain for histological research, and described the methods in use at Cornell University. He said that the calvaria should never be removed with a jerk, but by sawing through a little to one side of the great longitudinal sinus, and then removing the sides carefully after releasing the dura by means of a thin-bladed flexible knife with curved point. The brain should never be allowed to support its own weight, but should be suspended in strong brine. Several points concerning the handling of the brain were mentioned. The method of preservation which he preferred was by means of alcohol, beginning with fifty or sixty per cent. and gradually increasing the strength until the ordinary ninety-five per cent. is reached. He also passes alcohol through the vessels of the brain in a continuous stream for some time, and, besides, irrigates the central cavities of the brain. Whether brains hardened in this manner are well preserved for microscopical examination he was unable to say.

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PAPERS READ BY TITLE.

Dr. Wilder also presented a paper entitled "On Some Points in the Anatomy of the Human Brain," which was read in part, and referred.

A paper by Dr. E. C. Spitzka, on "Lesion of the Stratum Intermedium," with remarks and specimens illustrating the anatomy and physiology of this tract, was also read by title.

CASES OF HYSTERIA.

Dr. G. L. Walton, of Boston, reported a case of hysterical hemianæsthesia in a man, following injury; and another one of hysterical anæsthesia of special senses (hearing, smell, and taste) accompanying cutaneous hyperæsthesia. Both cases were relieved by the use of the magnet.

The Association adjourned, to meet at the call of the Council.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

A CLINICAL conversational meeting of the Society was held at the Hall of the Society on Wednesday, April 18. Dr. H. C. Wood presented the following notes of

HYDROPHOBIA, WITH INCUBATION OF THREE AND A HALF YEARS.

L. C., aged 26 years, was bitten July, 1878, in the thumb, by a dog which ran into the bank where he was employed and immediately ran out again. He went at once to a druggist, who applied nitrate of silver. The wound healed readily, and the sufferer remained in his usual health until December 22, 1882, about three years and a half after the infliction of the wound. Upon this day he left the bank feeling very unwell, and after a sleepless night sent for Dr. Harrison Allen, who, recognizing the gravity of the case, called me at once in consultation. My first visit was about 12 noon, December 23. At this time the patient was in a state of great anxiety, very pale, with very wide open, almost staring eyes, and a large, full, but very compressible pulse of 72. The respirations were irregular, continually interrupted by a spasm of the larynx and throat, which at times involved also the respiratory muscles. He had no dread of water, but any attempt to swallow produced violent spasms of the throat and respiratory muscles. Similar but less violent attacks were also caused by talking, so that the patient was only able to say a few words at a time.

At 7.30 P.M. the condition of the patient was worse; with the utmost efforts he had only been able during the day to swallow a few teaspoonfuls of liquids, and there was as much difficulty in swallowing solids as liquids. The pulse was 84; the patient was exceedingly alarmed and anxious, but perfectly rational; the axillary temperature 100.2° F.; the mouth dry. Respiratory spasms were very frequent.

At 12.10 midnight the mental condition had changed. All persons were still at once recognized by the patient, who was extremely excited, and delirious, not infrequently violently so. He had marked hallucinations, insisting that some one was under his bed. He raved continually, and at times force was necessary to keep him in bed. The pulse was 96; the temperature 101.5°; the respiratory spasms very bad and frequent. Enemata of all kinds were at once and violently rejected from the rectum. Swallowing was almost impossible.

December 24, 9 A.M.—The nurse reported that the patient had raved furiously all night. The symptoms were all worse; otherwise unchanged, except that he was continually spitting small quantities of a dry, thick, tenacious sputum. The staring expression of the eyes was remarkable. The raving delirium was marked by great anxiety and semi-unconsciousness, but when aroused the patient still recognized people.

At 6 P.M. the patient's strength was evidently failing; the mental condition unchanged. The expectoration had become much freer, but a good deal of it was still thick, almost grumous, discolored, even bloody. The under-lip was greatly swollen, from the continual biting of it during the spasms.

At 10 P.M., on attempting to swallow, the patient had the first general convulsion: when awake he was raving; much of the time he was in stupor. He died quietly the same night about 1 A.M.

Autopsy.—Brain much congested; the membranes over the pons and medulla very opaque. Sections of the medulla show in the neighborhood of the olivary bodies and in the floor of the fourth ventricle slight extravasations of blood; the cells of the nuclei slightly granular; no distinct lesion.

CASE OF GLIOMATOUS TUMOR INVOLVING THE FIRST, SECOND, AND THIRD FRONTAL CONVOLUTIONS.

Dr. H. C. Wood showed a brain taken from the body of E. M. at the Philadelphia Hospital. The man, whose age was probably about 30 years, had entered Dr. Wood's wards about two months previously. It was found impossible to get any reliable history, except that the symptoms had gradually developed. Whilst under care the man was very stupid and heavy, and had very decided but not complete aphasia. He rarely made complaints, but appeared to suffer from occasional severe headaches. The only other symptom was epileptic fits. These were very severe, of varying frequency, and accompanied by complete insensibility. The attendants asserted that the whole body was convulsed; but he was never seen in a fit by Dr. Wood. The right arm and leg were decidedly feeble, especially the arm, but there

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was no complete paralysis of motion or of special sense, so far as could be determined. The mental condition was such that both taste and smell might have been affected without such affection being manifest.

All the symptoms, in spite of treatment, gradually grew worse, and the epileptic attacks became very frequent and severe. The day before his death the man had twenty or thirty seizures, being most of the day in an epileptic status. He was stated by the nurses to have recovered consciousness in the evening, and the evidence was conclusive that after 6 P.M. the day before his death he had no more convulsions, and that early on the day of his death he was in his usual state. He was seen by Dr. Wood about 11 A.M. the day of his death. He was then completely unconscious and relaxed. The skin was extremely hot. Directions were given to take the bodily temperatures before and after death, with the following results:

First temperature, ½ hour before death, three or four hours after unconsciousness came on	107.4°	(axilla)
Immediately after death	108°	(mouth)
½ hour after death	109°	(rectum)
1 " " "	108.4°	"
1½ " " "	108.2°	"
2 " " "	107°	"
2½ " " "	106.9°	"
3 " " "	104.4°	"
3½ " " "	101.8°	"
4 " " "	99°	"
4½ " " "	98°	"

At the autopsy, a large diffused gliomatous mass was found occupying most of the interior of the left frontal lobe, pressing below upon the island of Reil, reaching superiorly and interiorly almost to the ventricles; posteriorly and superficially it encroached upon the lower portions of the ascending frontal convolution; no clot existed anywhere in the brain, but there was a general congestion, which was especially marked in the parts about the growth.

Dr. Wood remarked that the case was especially interesting on account of the great and rapid rise of temperature which occurred during the last apoplectic seizure, although there was no convulsion at the time. The cortex in immediate contiguity with the tumor, and hence most likely to be chiefly affected by a congestion, corresponds anatomically with that portion of the cerebral cortex of the dog which he had found to have some close connection with thermogenesis. There seems to have been in the case a true post-mortem rise of temperature, because a degree is greater than the normal difference between the mouth and rectum.

Dr. Bartholow said that the tumor was interesting on account of its unusually large size. Tumors of the anterior lobes are generally accompanied by epileptiform seizures, as Ladame has shown. Tumors of the cerebral cortex have, by their localizing symptoms, contributed to our knowledge of cerebral localization. In Cincinnati, some years ago, he had seen a woman who had died in a public square, and in whom the autopsy showed a tumor of the anterior convolutions, although no symptoms of it had existed during life. The late Dr. J. Hughes Bennett, a man of well-known and remarkable ability, had a tumor of the middle lobe without any symptomatic evidence of it during life. In regard to the question of temperature, Dr. Wood's position is in accordance with his theory, but it cannot be denied that tumors of this region may exist without producing any rise of temperature. Besides, this patient had numerous violent convulsions before death, and muscular action will induce changes which can account for the rise of temperature observed. Without positively denying the existence of a heat-centre, we can account for the temperature-record in this case by supposing it due to the convulsions. We know that muscular motion in animals will cause rise of temperature, and we know also that the chemical activity of the liver is sufficient to make it hotter than any other organ of the body.

Dr. Mills said that muscular motion cannot entirely explain the rise of temperature. He had seen a case of diffuse sclerosis in which the temperature continued to rise for six hours after death. Sometimes we have depressed temperature during life, at other times remarkable oscillations occur. He had reported a case in which such oscillation ranged from 93° to 100°. This was one of tumor,—in the optic chiasm.

Dr. Eskridge thought it very unfortunate that all the temperatures were not taken at the same point. He had found by trial that the temperature may be one-half or even one degree higher in the rectum than in the mouth at the same moment. In other cases, the temperature in the mouth was found to be two degrees higher than in the axilla: this is, however, rare, having been seen only in cases of extreme prostration. The only explanation of this difference is that the internal organ, being protected, suffers less from the radiation of heat. In the case under discussion we cannot safely draw a conclusion, as the temperatures were not taken at the same place.

Tumors of the anterior lobe may exist without any symptoms. About one year ago he reported to the College of Physicians several cases of abscess of the brain. In one of these the symptoms of serious brain-lesion immediately preceding death were not well pronounced. The patient, a man aged about 60, went about noon from the third to the first story of his residence, ate a large dinner, ascended the stairs unassisted to his room in the third story, lay down, and was seen sleeping at 4 P.M. At 6 P.M. he was dead. The autopsy

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revealed a large abscess which had destroyed a large part of the front portion of the right anterior lobe.

Dr. L. Turnbull regarded the subject of temperature as involved in much uncertainty. Every one is a rule for himself. High temperature is regarded as a sign of phthisis, cancer, etc., but is not always a sign. Muscular motion, as remarked by other speakers, will certainly cause elevation of temperature. It would be interesting to know what was the condition of the hearing in Dr. Wood's case.

Dr. Bartholow said that although the convulsions did not occur on the day of death, they were very violent on the previous day. The rise of temperature can be referred to the chemical changes resulting from the violent muscular motion.

REVIEWS AND BOOK NOTICES.

LECTURES ON CATARACT. By GEORGE COWELL, F.R.C.S. Macmillan & Co., London, 1883.

This little book of one hundred and twenty-six pages comes to us printed in fine, large type on heavy English paper, and well bound for the library. It contains six lectures delivered to the students of the Westminster Hospital, and, as the writer claims neither special merit nor originality, there is really nothing to say but that it is a handy little volume on the subject it treats, and that it is, as he says, not exhaustive, and therefore the student must seek further if he desires to be thoroughly booked up on the subject. It is well written, and a pleasant, readable book, but contains much less upon the subject it treats than is found in some of the more complete text-books, such as Stellwag, Soelberg Wells, De Wecker, etc. He gives, however, descriptions of some newer and later methods of some special surgeons. Very curiously, also, he applies the term secondary cataract instead of false cataract (cataracta spuria), and of anterior capsular cataract with posterior synechia, to cases where the pupil is closed from an infusion of lymph from iritis, and to the opacity of the lens produced by inflammatory changes from iritis, irido-choroiditis, etc., while nowhere is found a description of what is called, by all the well-known authors in ophthalmology, really secondary cataract,—*i.e.*, a thickening with translucency of the posterior, sometimes anterior, and at others of both capsules, after the operation for the removal of the cataract, be it by solution or by extraction. Neither does he speak of the necessity of operative influence in such cases to give vision. From these lectures it would naturally be supposed that all operations for cataract were either at once successful or complete failures, for he mentions nothing of the dangers of inflammation which may occur after the operation, with its ofttimes sequel of occlusion of the pupil from iritis or secondary cataract, from thickening of the capsule, with their remedies and treatment by operation, etc.

On page 60 he says, "It appears that David, in the year 1748, was the first to extract a cataractous lens;" whereas it was Daviel, and, as he wrote his article on "*Extractio Cataractæ*" in 1745, he must necessarily have made the operation before that time. P. D. K.

THE INTERNATIONAL ENCYCLOPÆDIA OF SURGERY. Edited by JOHN ASHHURST, JR., M.D. Vol. III. New York.

With becoming regularity the successive volumes of this great work are numbered with the things that are, ceasing to be that which is to be. The present book contains seven articles: Injuries and Diseases of the Muscles, Tendons, and Fasciæ, by Prof. P. S. Conner, of Cincinnati; Injuries and Surgical Diseases of the Lymphatics, by Edward Bellamy, of Charing Cross Hospital; Injuries of Blood-Vessels, by Dr. John A. Lidell, formerly Medical Inspector of the Army of the Potomac; Surgical Diseases of the Vascular System, by Prof. John A. Wyeth, of New York; Aneurism, by Richard Barwell, of Charing Cross Hospital; Injuries and Diseases of the Nerves, by Dr. M. Nicaise, Professor Agrégé of the Faculty of Medicine of Paris; and Injuries of Joints, by Prof. Edmund Andrews, of Chicago Medical College. The article by Prof. Nicaise will, we think, be found most interesting, because most novel, by most readers: it includes a discussion of tetanus. He commends nerve-cutting, and, with hesitation, also nerve-stretching, in the latter disorder. On the whole, the consideration of the treatment given of tetanus does not seem to us what it ought to be; there are no statistics, no citing of cases; opium is condemned, bromide of potassium said to be of no use unless employed in dangerous doses, whilst the unjustifiable intravenous injections of chloral are commended.

CHEMICAL AND PHYSICAL ANALYSIS OF MILK, CONDENSED MILK, AND INFANTS' MILK-FOODS. By Dr. NICHOLAS GERBER (Manager of the American-Swiss Milk Product Company of New York). Translated from the German by Dr. HERMANN ENDEMANN. New York, 1882.

The milkman of the last quarter of the nineteenth century "should examine the milk of single cows, and the yield of all mixed, with the aid of the lactodensimeter, Schatzman's cream-test, or lactobutyrometer." "The farmer shall keep notes respecting number of cows and daily yield of morning and evening milk;" "Milk from cows under medical treatment must not be used," etc., etc. (p. 98).

When the lion shall lie down with the lamb,

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the milkman and the schoolmaster will presumably sit down together. But in the mean time it is recommended to compel the dairymen to vend only pure milk; and doubtless city ordinances framed upon the sensible and lucid system of the author would be valuable. The public, however, are mostly inclined to pursue the policy of the late Sultan Abdul Aziz,—to enjoy life, and not to concern themselves over public affairs, especially those relating to hygiene. "The book is a laboratory guide which enables even beginners, and all such who cannot make the subject of milk-analysis a specialty, to cope with this otherwise complicated task." Its chapters include a description of normal cow's milk; physiological and other causes influencing the secretion; physical analysis of milk, and its microscopical and chemical examination; abnormal cow's milk; influence of food and adulteration; the milk of other animals,—goats, sheep, asses, and mares; also, condensed milk, and infant's milk-foods in powder. The volume closes with some comments on suitable governmental control of the milk-supply. The entire pamphlet contains only ninety-eight pages. In the language of Mrs. Toodles, "it is a decidedly good thing to have about the house," since both the public and the profession are interested in the purchase and consumption of milk. E. T. B.

MEDICAL ESSAYS, 1842–1882. By OLIVER WENDELL HOLMES, M.D. Boston, Houghton, Mifflin & Co., 1883.

To review a book like the present is a fate to befall a medical scribbler but once in a lifetime. With one or two exceptions, the essays are historical, philosophical, and ethical, rather than scientific, and all of them are from the pen of Oliver Wendell Holmes,—a pen so facile that the like of it has scarcely been seen before in the annals of medicine. Then, again, most if not all of these essays have been published before, and sundry of them have been as well fought over as the fields of Waterloo and Blenheim. We therefore only catalogue the virtues of the book before us. They are: I. Homœopathy and its Kindred Delusions; II. The Contagiousness of Puerperal Fever; III. Currents and Counter-Currents in Medical Science; IV. Border-Lines of Knowledge in some Provinces of Medical Science; V. Scholastic and Bedside Teachings; VI. The Medical Profession in Massachusetts; VII. The Young Practitioner; VIII. Medical Libraries; IX. Some of my Early Teachers.

THE MICROSCOPE AND ITS REVELATIONS. By WILLIAM B. CARPENTER, C.B., M.D.

The current volume of Wood's Library, so called, published by William Wood & Co., of New York, is a reprint of the last edition of Carpenter's work on the Microscope, so well known to every scientist who conquers nature with the microscope, and perhaps even more beloved by every amateur who amuses and improves his intellectuality with the same instrument.

GLEANINGS FROM EXCHANGES.

ACUTE ATROPHY OF THE LIVER.—Specimens from a case of acute atrophy of the liver, which was to some extent unusual, were brought to the notice of the Pathological Society of London by Dr. Cavafy. The patient, who was a young man, aged 28, was taken suddenly ill the day before he was admitted into St. George's Hospital; he complained of feeling ill, began to vomit, became jaundiced, and in five or six hours unconscious, and so remained until his death, at 4 A.M. on the third day. When admitted, he was deeply jaundiced and unconscious, with fixed dilated pupils; the liver-dulness appeared to be diminished, but the abdomen was much distended; the urine contained leucin, tyrosine, and bile-pigment. At the necropsy, numerous small hemorrhages into the peritoneum, pleura, and endocardium were found, as well as hemorrhages into the substance of the lung. The liver, especially the right lobe, was small, and weighed only thirty-six ounces; it was not markedly soft, but rather tougher than natural, barely retaining the impress of the finger; as seen through the capsule, there was no lobular marking, and the color was a dull brownish red. The cut surface had the same color, with here and there a little brown-yellow material; the lobules were not distinguishable. The kidneys and heart were in an early stage of fatty degeneration. A careful search for micro-organisms had been made by Dr. Lingard, under the direction of Dr. Klein. None were found in any of the organs, except in the hemorrhagic patches in the lungs, where a pneumonic process was beginning; in the alveoli were numerous micro-organisms, namely, bacilli of two kinds, large and small, and micrococci; in one place the bacilli were seen in the walls of the blood-vessels; the necropsy, however, was made thirty-four hours after death, and Dr. Cavafy therefore did not attach any importance to these organisms, which were probably due to early putrefactive changes. The investigation of this case, therefore, had failed to confirm the statements of Waldeyer and others with regard to a specific micro-organism in this disease.—*British Medical Journal.*

TEST-PAPERS FOR URINE-ANALYSIS.—At the last meeting of the Clinical Society of London, Dr. George Oliver, of Harrogate, gave a demonstration of the method he employs for the detection of sugar in the urine by means of test-papers. The test-papers were charged with the carmine of indigo and car-

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bonate of soda. When one was dropped into an ordinary half-inch test-tube, and as much water poured in as just covered the upper end, and heat applied, a transparent and true blue solution, resembling Fehling's in appearance, was obtained. (A transparent solution could not, at the meeting, be produced from the London water. The characteristic reaction with grape-sugar was, however, unimpaired.) If with the paper one drop of diabetic urine had been added, shortly after the first simmer, a beautiful series of color-changes appeared: first violet, then purple, then red, and finally straw-color; while, on the other hand, one drop of non-diabetic urine induced no alteration of color. The colors returned in the inverse order on shaking the tube, which allowed the air to mingle with the liquid. Reheating restored the colors again. Confirmation of the presence of glucose was obtained by dropping in a mercuric chloride paper, while the solution was still quite hot, after the complete development of the indigo reaction. Then there was produced immediately a blackish-green precipitate. No such precipitation occurred when a drop of non-saccharine urine was under examination by the indigo test; then the blue solution was merely turned into a transparent-green one. This test, as Dr. Oliver pointed out, discovers (*a*) the normal sugar; (*b*) the varying proportions of sugar which fill in the gap between the normal amount and that which characterizes diabetes mellitus, as in liver-derangements and vaso-motor disturbances; (*c*) diabetic proportions. It possesses the following advantages over Fehling's test: 1. It will detect sugar in any proportion in the presence of albumen, peptone, blood, pus, or bile, and as readily as in ordinary diabetic urine. 2. It gives no play of colors with uric acid. 3. It possesses portability, cleanliness, and stability. Moore's, Trommer's, and Boettger's bismuth tests are all inferior in delicacy. As yet, Dr. Oliver had not discovered anything besides glucose which brought out the characteristic display of colors.—*British Medical Journal.*

ON CYSTOTOMY BY A MODIFIED LATERAL METHOD IN CERTAIN CASES OF ENLARGED PROSTATE.—Mr. Reginald Harrison says, in reference to cystotomy, that "the selection of a method for opening the bladder should have reference only to the object to be attained, or the contingencies that may arise. If, for instance, we desire merely to introduce the finger into it, as a preliminary to extracting a small stone, the median operation answers perfectly; whilst if a larger stone, or an unknown quantity of anything, has to be dealt with, the lateral incision will, as a rule, be preferable.

"It has been advanced by those who favor the median incision, which is practically a urethrotomy, that it is both simple and safe; its admitted disadvantage lies in the comparatively small space it provides for manipulating and extracting; whilst, on the other hand, the lateral incision, though affording more room, is considered to be attended with an increased risk and a greater degree of difficulty, so far as its performance is concerned. The median operation need not necessarily involve anything more than the opening of the membranous urethra. The completed lateral operation further includes the division of structures constituting the neck of the bladder; and it is to this part of the proceeding that any increased risk or difficulty is to be attached.

"A little reflection shows that it is possible to closely assimilate the lateral with the median operation, that is to say, to dispense with the incision, not to the staff, but along the staff, should it be found, on exploration with the finger, that the additional room which the latter part provides is unnecessary for the object in view. It need hardly be said that this modification of the lateral method, where it is found, on digital exploration, to be feasible, frees the operator from executing the only portion of the operation to which any increased risk is attached; whilst, on the other hand, he has the consciousness that, should it turn out to be necessary, he can, by the completion of the deep incision along the staff, avail himself of all the advantages which are conceded by surgeons to the lateral method of opening the bladder." Mr. Harrison illustrates his method by the description of a case.—*British Medical Journal.*

MISCELLANY.

A NEW DRESSING FOR WOUNDS.—From Prof. Bruns, of Tübingen, we receive a fresh addition to our means for carrying out the after-treatment of wounds, in the form of a preparation which he calls "wood-wool," and which he recommends to surgeons (*Berl. Klin. Woch.*, No. 20). Fine-grained wood in the form of splinters and shavings, such as are largely employed in paper-factories, according to Bruns, is the kind of material to be used in preparing the dressing which is called wood-wool. Pine wood is preferred, and especially the *Pinus picea*, which is poorer in resin and of coarser grain as compared with the wood of other pines and firs. The further preparation of the wood shavings and splinters consists in their reduction to a state of finer division by being rubbed through a wire sieve, then dried, and finally impregnated with various antiseptic substances. That considered best is a half per cent. of corrosive sublimate and ten per cent. of glycerine (the percentage apparently referring to the ratio between these substances and the wood-wool). The advantages of such a dressing are believed to be manifold. Compared with ashes and turf it is absolutely clean, fresh, and of white color, and is soft

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and pliable like ordinary wool, and, withal, of extraordinary cheapness. It possesses, in virtue of its contained resin and ethereal oils, certain antiseptic properties, and is so easily adapted to the wounded parts and of such elasticity that a uniform and equable pressure is easily obtained. Its principal property, however, is its extraordinary power of taking up fluids: in this it excels all other forms of dressings; it absorbs twelve times its own weight of fluid, so that ten grammes of dried "wood-wool," after complete saturation, weigh one hundred and thirty grammes. Simple sawdust absorbs only three to four times and a half its weight of water, ashes only nine-tenths, and sand only four-tenths. This dressing has been in use by Bruns for half a year, and he has every reason to be greatly satisfied therewith. With the exception of one case of erysipelas, no secondary accidental wound-diseases were met with.—*Medical Times and Gazette.*

THE election of Prof. Theophilus Parvin to the chair of Obstetrics and Diseases of Women in Jefferson Medical College was one reflecting great credit upon the wisdom of the Board of Trustees, as it is generally regarded as the best selection that could be made for the school. Dr. Parvin, in leaving the Louisville University, in which he occupied a similar position, to come to Philadelphia, leaves behind him an excellent record, and brings with him the good wishes of a large number of friends. As a teacher, practitioner, and medical journalist he is widely known to the profession; and we welcome him to a larger field of labor in full confidence in his ability to fill it with distinction. He was born in 1829 in Buenos Ayres; during his early years he lived near this city, where he received in 1852 the degree of M.D. from the University of Pennsylvania. He was President of the American Medical Association in 1879, and his address at Atlanta will be long remembered by those who heard it. He has also held professorships in the Medical College of Ohio and in the College of Physicians and Surgeons of Indiana. He is writing a systematic work on Midwifery, which will probably be issued this fall. He is a scholarly writer, an impressive speaker, an original and experienced practitioner, and, withal, a man of sterling character and positive convictions.

DR. ELLERSLIE WALLACE, whose resignation on account of failing health has been already noticed, was elected Emeritus Professor of Obstetrics and Diseases of Women in the Jefferson Medical College by unanimous vote of the Trustees. He had been engaged in teaching at this school for the last twenty-one years.

DR. WILLIAM H. PARISH performed the Porro-Müller operation for Cæsarean section upon a woman at the Philadelphia Hospital, June 29. Both mother and child have thus far survived the operation, of which fuller details will be presented as soon as the results of the operation can be definitely stated.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY FROM JUNE 23 TO JULY 7, 1883.

SMART, CHARLES, MAJOR AND SURGEON.—Assigned to duty in the Office of the Surgeon-General U. S. Army, and, in addition to his duties in the Surgeon-General's Office, will continue to serve as a member of the National Board of Health. Paragraph 8, S. O. 147, A. G. O., June 27, 1883.

BIART, VICTOR, CAPTAIN AND ASSISTANT-SURGEON.—Assigned to duty as post-surgeon at Fort Sisseton, D.T. Paragraph 1, S. O. 102, Department of Dakota, June 13, 1883.

WINNE, CHARLES K., CAPTAIN AND ASSISTANT-SURGEON.—Assigned to duty as post-surgeon at Fort Winfield Scott, California. Paragraph 1, S O. 69, Department of California, June 19, 1883.

WORTHINGTON, JAMES C., CAPTAIN AND ASSISTANT-SURGEON.—Assigned to duty at cantonment on the Uncompahgre, Colorado. Paragraph 4, S. O. 128, Department of the Missouri, June 21, 1883.

EVERTS, EDWARD, FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Relieved from duty at Fort Cœur d'Alène, and assigned to duty as post-surgeon at Fort Lapwai, Idaho. S. O. 81, Department of the Columbia, June 14, 1883.

STRONG, NORTON, FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Relieved from operations of Paragraph 2, S. O. 42, c. s., Department of the Platte, and assigned to duty with battalion of infantry now on duty between Forts Thornburgh and Bridger, Wyoming. Paragraph 2, S. O. 83, Department of the Platte, June 21, 1883.

To be assistant-surgeons, with the rank of captain, after five years' service, in accordance with Act of June 23, 1874:
Assistant-Surgeon VICTOR BIART, June 6, 1883.
Assistant-Surgeon WILLIAM W. GRAY, June 6, 1883.
Assistant-Surgeon LOUIS BRECHEMIN, June 6, 1883.
Assistant-Surgeon LOUIS A. LA GARDE, June 6, 1883.
Assistant-Surgeon JUNIUS L. POWELL, June 6, 1883.
A. G. O., June 25, 1883.

HEGER, A., MAJOR AND SURGEON.—Relieved from the further operation of Paragraph 9, S. O. 55, c. s., Department of Texas, and will return to his station, Fort Clark, Texas. Paragraph 2, S. O. 69, Department of Texas, June 25, 1883.

HAVARD, VALERY, CAPTAIN AND ASSISTANT-SURGEON.—Assigned to duty with expedition to complete the survey of the country west of the Rio Pecos, Texas. Paragraph 8, S. O. 68, Department of Texas, June 22, 1883.

RAYMOND, HENRY J., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Granted leave of absence from July 14, 1883, to September 1, 1883, with permission to go beyond sea, and resignation accepted, to take effect September 1, 1883. S. O. 150, A. G. O., June 30, 1883.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY FROM JUNE 23 TO JULY 7, 1883.

Surgeon E. KERSHNER detached from the Navy-Yard, New York, July 1, and ordered to the Receiving-Ship "Colorado," New York.

Assistant-Surgeon T. C. CRAIG detached from the "Colorado," July 1, and ordered to the Naval Hospital, New York.

Assistant-Surgeon J. H. BRYAN detached from the Naval Hospital, New York, and ordered to the Museum of Hygiene, Washington, D.C.

P. A. Surgeon L. G. HENEBERGER detached from the Museum of Hygiene, and ordered to the Navy-Yard, New York.

P. A. Surgeon J. F. BRANSFORD detached from special duty, Washington, D C., and ordered to temporary duty at the Naval Academy, Annapolis, Md.

Medical Inspector A. C. RHOADES detached from the Naval Academy, Annapolis, Md., and ordered to the U.S.S. "Tennessee," and as Fleet-Surgeon of the North Atlantic Station, *vice* Medical Inspector T. W. Leach, detached and placed on sick-leave.

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PHILADELPHIA, JULY 28, 1883.

ORIGINAL LECTURES.

CLINICAL LECTURE ON DISEASE OF THE KNEE-JOINT.

Delivered at the Bellevue Hospital Medical College

BY LEWIS A. SAYRE, M.D.

Reported for the *Medical Times* by EDWARD DEVELIN, M.D.

GENTLEMEN,—This colored boy whom I now present to you is 12 years of age, and states that for the past four years he has been suffering with a difficulty of the knee-joint. The parents are both healthy; and the boy himself has always been stout and strong, until he met with a slight accident in which the knee was hurt: he, however, continued to run around for some time after, complaining but very little.

We must now endeavor to find out what is the matter with the boy. Further than what I have just stated, I am unable to get any history from the mother. You will observe that the right leg can be brought straight, and that the left leg is flexed strongly, with the toes everted, with a luxation of the tibia at the knee. That is an evidence that there has been a long-continued inflammation, with absorption of the external condyle and upper portion of the tibia. You will observe this peculiar boggy appearance over the external and internal condyles; all the natural sulci are here filled up, and the knee now presents the appearance of a smooth, globular swelling. To the touch it has the sense of fluctuation, but it does not fluctuate. I think there is a gelatiniform substance within the joint. You notice that as I press upon a certain point, here, he winces from the pain induced. Now, you can often make your diagnosis in these cases by a simple observation of this characteristic deformity, and then thinking to yourself which muscles will produce this position of the leg. You may take any number of cases of this so-called white swelling of the knee, that have gone on to destruction of the cartilage of the condyles, and they will invariably assume this position of flexion of the leg, with eversion and rotation outward of the foot, just as you see here. The leg in this case, you observe, is flexed to a right angle with the knee. Now, a careless observer might think this knee-joint was filled with fluid, and even to the touch it gives a deceptive sense of fluctuation, but there is no fluid within the joint. It is not a *hydrops articuli*, but this elastic semi-fluctuating feeling is due to the gelatiniform degeneration of the cartilage and other tissues of the joint, commonly called *fungus articuli*.

As I press upon the knee generally I give him no pain, but when I press directly upon the coronary ligaments it causes intense pain; yet I may press a quarter of an inch below that spot and it gives no pain, and the same above this point. This is of the greatest practical importance; for I have seen eminent surgeons examine a diseased knee-joint, and just pass over this little spot above the coronary ligaments, and state that no pain was induced by pressure upon all parts of the knee. This point of tenderness is just where the coronary ligaments are attached on either side, and the slightest pressure upon them, as you observe, produces an instantaneous spasm of pain. This is what makes the case more serious than an ordinary synovitis.

In synovitis the knee has the same appearance as this, but it has a fluid fluctuation. You can bring the leg out straight in synovitis, and the patella floats upon the fluid.

In this disease of the knee-joint, as shown you in this case, you cannot straighten the leg or move the patella, and if you attempt to straighten the leg you will cause intense pain, unless your extension be made in the line of the deformity.

You have often heard me speak of extension and counter-extension: this is the basis of the general treatment in all these diseases of the joints, *but it must be made in the right direction.* You observe that I am making extension now in two directions, and that I cause no pain, simply because I am making my extension in the line of the deformity, which is from just below the head of the tibia upwards, at an angle, towards the foot, and also extending from the leg parallel with the limb. By this means I prevent the diseased surfaces of the joint from rubbing together, and at the same time relieve him perfectly from all pain. Now, when this extension has been kept up for some length of time, the line of extension may be gradually changed, so that the limb can be brought perfectly straight.

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If I make my extension in one direction alone, and that parallel with the axis of the limb, I cause great suffering; because I bring the diseased portion of the anterior surface of the tibia against that of the femur; but if I now go behind the leg and press the tibia upwards, my extension relieves him at once. If I could sit here and hold this leg for two or three months, keeping up this extension, the knee would get well. Here, then, is your first point of practical importance: you must secure the limb in this position by mechanical means. This can easily be done by the application of weights and pulleys. If you have not mechanical ingenuity enough to devise some means of holding the leg in this position, it is your duty to sit there and hold it until a cure is completed. It is your business to accomplish this result. I do not care how you do it, as long as it is done.

This end is, however, easily accomplished by putting a strip of adhesive plaster on either side of the leg and securing it with a roller bandage, then, with your weight and pulley, make your traction in the line of the limb. You then pass a band behind the tibia so as to bring the leg forward and upward. You can then gradually elevate your first line of traction and depress your second, until you have brought the leg into nearly the straight position. You can then apply my extension knee-splint, which I have so often shown you.

Now, during the time that he is under treatment in bed, you must use your general treatment, as well as your local treatment, according to the condition of the patient.

In this case the boy will be placed in bed, with the double extension applied as I have just described, and the actual cautery applied over the coronary ligaments. There will also be a large dry sponge bandaged tightly around the knee (both thigh and leg being well bandaged), which will then be saturated with warm or cold water. The absorption of the water by the sponge will cause additional pressure upon the joint, and by this means hasten the absorption of this deposit around the joint.

It may be necessary to open the knee if this material does not become absorbed; but by your extension you have removed the possibility of attrition of the joint-surfaces, and in almost all of these cases, as here presented, they will recover under this treatment with a useful joint and without deformity.

If the disease had progressed further and pus had formed in this joint, this boy would not look as hearty as he does now. We should then have to aspirate the joint, which might need to be repeated; and if this were not successful, we should then have to open the joint and insert our drainage-tubes for the purpose of securing a free discharge of all pus. This, however, is merely an osteitis and syndosmitis all going on together. As for diagnosticating where the disease started, whether in the cartilage, or in the bony structure near the joint, it is difficult to say, because in the morbid process they so soon become commingled one with the other.

We have here all the appearances indicating a strumous disease of the joint, and yet you see it has been developed in a perfectly healthy boy, whose parents are both healthy, without any evidences of constitutional taint whatever; so that a low grade of inflammation, from its long continuance, may produce a precisely similar condition of both local and constitutional manifestations as the taint we find in those who have an hereditary constitutional vice.

If, in this case, the treatment is conducted as I have told you, it may be that when the disease is cured we may get perfect motion within the joint. Or it may be that the difficulty is associated with a depraved constitution, so that every attempt at passive motion, although the disease itself may be cured, only excites inflammation; then you must stop your passive motion, as I have frequently told you, and compromise the matter by anchylosis.

Now, after the limb can bear firm pressure upon the articular surfaces, you can remove your apparatus; and then is the time when you begin your passive motions to prevent the joint from becoming permanently anchylosed. Make them very gently at first, then with friction and massage endeavor to increase the circulation in order to secure absorption of the deposit around the joint. Day by day you increase these movements, going a little further each day, but not so as to cause inflammation again. After you have gained some movement, make some short, quick movements within the range of your first movement, and on the morrow you make this same movement again, going over the distance gained yesterday quite easily

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without causing any pain. In this manner you excite a flow of the synovial fluid and can then secure additional movement. The synovial membrane, remember, only pours out its fluid under irritation: as long as it is quiescent it does not secrete. Now, do not be in too much haste to secure an increase in your movements; just carry them to the point of endurance, then put your splint on and lock it up, following out the same plan day after day.

In some cases the constitution is so bad you can never restore the use of the joint; every time you make passive motion you will excite inflammatory reaction. If you have produced pain by your movements, it should certainly pass off within twenty-four hours. If, now, the pain last over that time, your movements may have been too rapid and severe; consequently you must stop for several days, until all inflammatory action has subsided, then you can commence anew. Just remember this rule. If, however, as I say, there is some peculiar morbid condition of the system, no matter how gentle you may make your movements they will almost invariably be followed by inflammatory action within the joint: you have then to compromise in the matter and cure your patient with anchylosis. Now, how shall this be done? You simply have to lock the joint up and keep it absolutely quiet.

Now as to the position in which you are going to fix it. Anchylose all joints in the position in which the limb is going to be of most service to your patient. If it is the elbow, it should be at right angles, with the hand semi-pronated, so that the patient can feed himself. If the elbow be anchylosed with the arm in the straight position, it can be of little use but to carry baskets or such articles.

Now, it is just the reverse at the knee, in my opinion, although the rule is given by most authorities to anchylose it at an obtuse angle of about 115°. I must differ with this view, however. It is of course more desirable when sitting down that the leg does not project; but anchylosis at this angle is so insecurely fixed that by any sudden jump the point of union is liable to be snapped, which will then start afresh an inflammation, at a time when, in all probability, the patient is away from his home, and before he can be carried there a severe inflammation has set in, which may result in the loss of the limb.

I know of one gentleman whose knee was anchylosed at this angle, and who, while stepping from a stage, brought his weight to bear upon the anchylosed joint, immediately snapping its union. He lived in Brooklyn at the time, and the accident occurred to him here in New York. This accident resulted in the loss of his limb.

So, if you are going to anchylose the knee, I would advise you to anchylose it as nearly straight as possible; the patient then can walk better and with greater ease and safety.

Now, suppose you have a case brought to you with the knee anchylosed at an acute angle. You will, of course, endeavor to break it up; but how is that to be done? You would not break up a bony anchylosis of the knee if it was in a straight position, but, if you have it anchylosed at a right or an acute angle, it is necessary to break it up to secure motion or a better position.

You must, however, remember that we have both bony and fibrous anchylosis. Now, how are you going to decide which is which?

Sometimes the fibrous anchylosis is so close and firm that you cannot move it by any ordinary means.

Now, although your efforts may have failed to secure any perceptible motion, the very fact of pain following your efforts on the next day is sufficient evidence that some motion has been obtained; for if there had been no motion there would have been no pain at all resulting from your efforts.

If there has been the slightest motion secured by your efforts, there is no necessity for using the saw, but use *brisement forcé*. Now, having ascertained that you have some motion, put your patient under the influence of an anæsthetic; then knock the patella loose. This is, as a rule, the most troublesome thing to do, although you can sometimes crowd it off with the fingers and thumbs. If you cannot do this, however, you can take an ordinary large door-key and cover it well with leather; then, placing the ring portion of the key just under the edge of the patella, hit the end of the key a smart blow with a mallet, your assistant, meanwhile, holding the limb as firmly as possible. By this means you can generally split off the patella from its fusion with the femur or tibia, or both.

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Having knocked the patella off, you then endeavor to bend the leg backward, and, having effected your purpose, you now bring it forward, keeping up these motions until you have brought the leg out straight and can flex it upon the thigh. By this means you rub off all the little irregularities, exostoses, which have developed. Just here I would speak most emphatically upon one point which is so often omitted; viz., do not stop as soon as you feel the adhesions snapping under your pressure and be content with the little motion you have gained, but make your breaking up of the joint complete. *Do not stop until you have done this.*

The skill required, however, is in your after-treatment. If it be in an adult, strap each toe separately; if in a child, you can place cotton between the toes and bandage the whole together at the same time. Then take two broad straps of adhesive plaster and carry them up the sides of the leg to the head of the tibia, firmly bandaging the leg with a roller bandage from below up to the same point; then pack the popliteal space with cotton, to prevent pressure upon the tendons, carefully padding around the condyles of the femur and patella, so that the latter may not be pressed upon on either side; then draw your bandage as tightly as you can draw it around the knee-joint only, and, having secured this, take a piece of sponge about the size of your thumb and place it over the femoral artery, then carry your bandage up the thigh, securing the sponge in position. This sponge is placed over the artery so that the pressure by the bandage at that point reduces the circulation through the knee-joint and leg below. Now, do not make your pressure too strong, to occlude the artery entirely, or you will have gangrene resulting from your treatment. You simply wish to partially obstruct the flow of blood to the parts.

Having now bandaged the limb in this manner, you will secure the joint from any possibility of movement by encasing it in the plaster-of-Paris bandage. You now put the patient in bed and elevate the limb, and apply your extension in a line parallel with the limb; you now apply an ice-bag or an ice-water coil over the knee-joint.

Among over one hundred cases in which I have applied this plan of after-treatment, I have yet to see the one in which constitutional disturbance followed the operation. It may be sometimes necessary to give the patient a hypodermic of morphia on the night following the operation, but you must, of course, be governed by circumstances.

You will probably require to keep your patient in this position for ten or twelve days; then remove your sponge compress and the dressings around the knee. The joint may perhaps look black and blue as a result of your violence, but you need not mind that. You may now commence to make a little passive motion to prevent anchylosis. Then re-dress the knee again, strapping it firmly, but omit the sponge compress over the artery; that is all the difference there is in the dressing. You lock the joint up in precisely the same manner as before. In two days' time you can take it down again and make a little more movement. You may perhaps require to give a little chloroform in order to secure your movements. From this time on you will follow the same routine of treatment, applying firm compression and ice to the joint after each attempt at motion, until at the end of three or four weeks you will probably be able to apply an apparatus by which the patient can make movements himself, continuing these movements until the recovery has become complete. This constitutes the treatment of fibrous anchylosis.

If instead of being a fibrous anchylosis it should prove to be a case of bony anchylosis, it will be necessary to make exsection of the bone by removing a V section from the femur, as advised by Dr. Buck, and then bring the leg straight, wiring the bones together with three silver wire sutures.

Now, in order that you may know precisely the size of the piece of bone it is desirable to remove, you can take a piece of pasteboard and mark the exact angle of the limb; then mark out the V-shaped piece on the pasteboard which it is necessary to remove in order to bring your pasteboard tracing straight. Then, laying your V-shaped section upon the patient's knee, you can mark the size piece that is necessary to remove in order to bring his leg straight. All this, however, is not necessary if you have a good mechanical eye.

It is preferable to perform the whole operation antiseptically; and, if skilfully performed, no pus will result.

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These are a few of the most practical points which I cannot impress upon you too strongly the necessity of observing in these cases of disease and anchylosis of the knee-joint.

ORIGINAL COMMUNICATIONS.

FRACTURE-REPAIR.

AN EXPERIMENTAL STUDY ON THE IDENTITY OF CALLUS AND TRUE BONE.

BY GEORGE E. SHOEMAKER, A.M., M.D.

(Extract from a Thesis presented for Graduation at the University of Pennsylvania, 1882.)

CERTAIN fundamental facts, such as that broken bones would reunite, and that by means of a new substance resembling bone, have been undisputed for centuries; but the origin, composition, structure, and manner of formation of this bone-like substance have been much discussed. Although now for so many years the microscope has lent its aid to such investigations, a comparison of authorities shows such a present diversity of opinion that there is undoubtedly room for further research, both in the physiology and pathology of the structures concerned. Especially does the identity of the new formation with true bone seem to be undetermined. The subject of callus-formation, if interesting, is undoubtedly difficult for original study; and the writer would refer at the outset to his appreciation of the disadvantages which surround a student in undertaking such work. The record of his observations, however, is, after all, only the expression of an individual opinion, as has been said, or an attempt to picture an individual impression; and from this stand-point there is room for every one.

The experiments herein described were performed in the laboratory of the University of Pennsylvania, under the supervision of Dr. H. F. Formad.

I. In taking the affirmative of the proposition that callus becomes true bone, analogy would seem to be against it. The repair of most other animal tissues, after a break in their continuity, takes place by means of a material unlike the wounded tissue; and, in spite of the complicated changes which aid in restoring the shape and function of the part, the new-formed joining substance never becomes entirely like the original tissue, as observation and abundant authority show. Undoubtedly, this important law obtains, however, that the embryonal tissue which is produced in the repair-process has a "tendency to reproduce the tissue of the region where it is situated."* After the repair of a ruptured *muscle*, as shown by Paget, Adams, and others, the new tissue "remains permanently as a fibrous band."† The union of *nerves*, though often studied, occurs in a manner but little understood. A process is, however, claimed for it which sometimes results in a rebuilding of true nerve-tissue. This process, whatever it is, is still unequal to the repair of any considerable loss of nerve-substance, the breach being then permanently filled by cicatricial tissue and the function of the part being performed by collateral trunks and fibres. The permanence of the scar in areolar connective tissue and in skin is well known, and a familiar microscopic appearance is that of "old cicatrix," consisting entirely of stiff fibrillar connective tissue which is perfectly non-vascular.

If then callus becomes true bone, it is in exception to the general rule. But analogy, at best, can show but probability in any argument, and in the presence of higher proof is of limited value. This other proof we may seek under the second head:

II. Structural Likeness to Normal Bone (*with preparations from the human subject*).

Aside from experiments upon callus-formation, which were made upon the dog, as detailed farther on, important evidence can be obtained from the study of old callus taken from the human subject. No amount of theory as to the origin of callus-material, or observation of the method of its organization, can determine absolutely the results of the process; and it is these results which chiefly concern us here. Fortunately, they are tangible and subject to direct examination. The plan pursued in obtaining examples has been to secure from the dissecting-room of the University, and from the stock of bones in its boiling-room, specimens of old fractures. The difficulty in obtaining material of this kind with a known history is, of course, great; but this disadvantage is not all-important. Great care was taken to avoid mistakes in the selection of fractures. As is well known, the external evidences of such a lesion may

* Cornil and Ranvier, Path. Histol., 71, 1880.
† Ashhurst's Surgery, 207, 1878.

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be so far obliterated by time as to render their certain detection difficult; but there are few cases which section with a saw will not make clear. It is also exceedingly hard to recognize the former relations of a piece of bone which has undergone the necessary preparation for the microscope; and, however clear upon the untouched bone may appear the limits of a line of fracture, their identification upon the section is by no means easy, as the writer found to his cost in several carefully-prepared specimens.

Two methods were followed in preparing the sections for the microscope:

(*a*) Decalcification by acids, and cutting.

(*b*) Grinding and rubbing down the hard bone to the required degree of thinness.

The best results and most characteristic appearances were obtained by the second method, which was carried out as follows. A plane surface, including the line of fracture, was first secured by sawing with a very fine jeweller's saw. This surface was ground smooth and flat on an emery-wheel, and polished by rubbing with a very fine stone wet with water. Solid shellac was now melted upon this polished face with an alcohol-flame and rubbed in. A plane surface upon a block of wood was similarly covered with melted shellac, and while both were kept hot the ground surface of the bone was accurately brought in contact with the wood-surface by rubbing. After the shellac had cooled, the saw removed the surplus bone, and all that remained of the process was the careful grinding down and polishing of the remaining surface of the layer of bone cemented to the wood. When the layer was sufficiently thin for microscopical examination, the whole, block of wood and all, was immersed in alcohol, which completely dissolved out the shellac and left the fragment of bone ready to be stained and mounted in the usual way.

Let us first consider, among the many, specimens from a large callus overgrowth upon a human femur. The portion selected was of light, spongy texture, being composed entirely of cancellated tissue, and it ought to present the most unfavorable conditions for comparison with normal bone. Under the microscope there is seen in the decalcified preparations a great irregularity in the arrangement of the ordinary elements of bone-tissue; but this irregularity does not seem to be sufficient to degrade even this to a cicatrix. The medullary spaces are about normal in size, and quite a number of well-formed Haversian canals, with their concentric arrangement of lacunæ and lamellæ, are to be found. Canals of Havers would only be expected in a few portions, however; for, as stated, the whole structure resembles cancellated bone-tissue, where these seldom occur, inasmuch as the processes of nutrition can be carried on directly from the medullary spaces. Well-developed lacunæ with canaliculi are seen throughout the structure, their relatively large number being a remarkable feature of this callus.

Again, a full-grown human fibula, fractured within the upper third, was selected. The medullary canal was in part re-established: therefore the fracture was quite old. Decalcified sections were made, including a layer of callus between portions of original bone. Throughout, well-developed Haversian systems appear, with great regularity of structure. The limits of the callus are not sharply defined, and it is impossible accurately to distinguish it from the original bone by its structure.

The most beautiful demonstration, however, was obtained from sections of a human tibia. Fracture, approximately transverse, had occurred at the junction of the lower and middle thirds. The upper fragment was displaced forward and inward, overlapping the lower about two and a half inches. Externally all superfluous callus had been absorbed. Upon division with the saw, the evidences of a repaired fracture were complete. A double partition of overlapped cortical substance still existed through most of the part involved. At one point, however, communication between the separated portions of the medullary canal had been re-established by the eating away of both the compact walls intervening, so as to make them cancellated. The remains of the old medullary canal were still seen in the cross-section upon either side of the partition. We have here, then, a typical instance in which it was necessary to bridge over with callus a space between overlapping bones, and from the callus within this space, at a point where the original fragments had never been in contact, the sections were prepared by grinding. These particulars are given to show that there was no possibility of mistaking bone of the original formation for callus. What, then, were the microscopical appearances of this specimen?

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One of the sections, prepared by grinding, includes some cortical substance of the callus-growth, as well as some cancellous tissue, neither of which presented to the naked eye any points of difference when compared with the original bone.

The whole exhibits a remarkable example of "regeneration." Haversian systems appear beautifully formed in the cortex, lacunæ and canaliculi showing nicely. There is not even a great irregularity of arrangement. The cancellous tissue is also typical bone. In the walls of the medullary spaces there is no room for the establishment of Haversian systems, and, consequently, none exist, as is the case in normal bone. The arrangement of the lacunæ is also exactly normal, nearly all having their long axes parallel to the sides of the portion under examination, no matter what curves these sides may describe. There seems, however, to be one point of difference: it is in the number of lacunæ within a given space. For example, a typical field of the cancellated tissue of normal rib showed, under the one-eighth objective, thirty-three lacunæ. A similar field from tibia callus showed seventy-four, another from humerus callus showed ninety-six, another seventy-one lacunæ. In each of these instances, which were taken at random, the callus exhibits more than twice as many lacunæ as are seen in the normal bone. Again, a careful examination of the cortex of the tibia callus will detect very slight irregularities in the arrangement and direction of the Haversian systems. The canals run somewhat more obliquely to the long axis of the bone, and the concentric systems of lacunæ around them form circles somewhat less finished and more irregularly placed than is normal. No one, however, would for a moment hold, upon examination of the slides, that these differences are sufficient to make this callus anything else than true bone. Nothing but an examination of the slides can, however, make the point evident.

We have then shown a strong structural likeness. To complete the discussion, similarity should also be shown in chemical composition and in mode of formation.

Chemical composition will not be here studied; and it may be considered as the least disputed of the above points. It is stated by one writer that callus contains twenty per cent. more of lime-salts than does the neighboring bone; but it is evident that this must vary greatly with conditions and localities. Without attempting to discuss the point, it may be said that if it be true, as indicated above, that callus contains more lacunæ than does bone regularly formed, its specific gravity when dried should be less, other things being equal.

The discussion of the third division of the subject will now be taken up, and its theory will be illustrated by sections prepared from the bones of the dog.

III. Resemblance in Mode of Development between Callus and Bone.

As to the normal method of bone-formation theories are rife. Prominent is that of Virchow, with his application to normal bone-development of the changes which occur in rachitis; but the explanation of H. Müller, which has been verified by Cornil and Ranvier,* presents many points of excellence. According to his theory, osseous tissue is developed according to the same general law, whether from cartilage, from fibrous tissue, or beneath the periosteum.

* * * * * * *

This law may be thus summed up. The ground-substance of the tissue is dissolved; the cells proliferate, become free, and give origin to an embryonic tissue, the elements of which [osteoblasts] become surrounded by a new fundamental substance and are transformed into bone-corpuscles. Rindfleisch agrees, as follows:† "Genuine osseous tissue is produced in that in a connective tissue richly supplied with capillaries . . . there first arises a dense basis-substance, which encloses the cells becoming stellate in regular interspaces, thereupon, however, itself experiencing an impregnation with the salts of lime." Other authorities would have us believe that the large clear cells, or osteoblasts, which really form the bone are derived from the blood, and are not descendants of the cartilage-cells and fibrous tissues. Frey, for example, describes them as differentiated from a mass of lymphoid cells derived from the blood, which is a point of great interest in connection with the origin of callus-material from the medulla of long bones. Whatever the origin of these large cells, which correspond to the nucleated cells with processes which Virchow demonstrated in lacunæ, they

* Path. Histol., Amer. ed., 27, 1880.
† Path. Histol., Amer. ed., 56.

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certainly play a most active part in the construction of bone-tissue, and we shall be able to demonstrate their presence in ossifying callus in the bones of the dog.

If the process of true bone-formation has been differently understood and described, that of callus-growth has been more so, the history of the various investigations of the subject being most interesting.

* * * * * * *

The first step in the process of repair is, roughly speaking, the deposition in the neighborhood of the fracture of a spindle-shaped mass of formative material. The second is the organization and arrangement of this substance into the permanent form which it is to assume. The origin of the reparative material, though disputed, is various; the blood, including probably the white corpuscles, the surrounding connective-tissue structures, the medulla in the case of the long bones, and the periosteum, each having a part to contribute.

* * * * * * *

The method of ossification now comes up, and we find that it proceeds in a way analogous to that in which true bone is formed. Indeed, all the elements and conditions necessary to true bone formation are present,—*i.e.*, a new and healthy periosteum surrounding the whole; abundance of hyaline and fibro-cartilaginous material just suitable for bone-formation; a plentiful blood-supply; the modifying influence of the presence of bone-tissue; the presence, above all, of the so-called osteoblasts; and, *a priori*, we would expect a true bone-regeneration.

In order to study these points effectually, preparations were obtained by fracturing the leg-bones of the dog, and from these sections were made for the microscope. Here, as elsewhere, long bones were selected as being most typical. The method pursued was as follows:

The dog was etherized, and the foreleg broken by direct force. Wooden splints and roller bandages were carefully applied, with a sedative dressing of lead-water and laudanum, until all swelling had subsided, when plaster bandages were used, as giving greater security and less trouble. The best of food and attention were given, in order to secure the most favorable results. After the proper interval the animal was chloroformed and tied, the main artery of the fractured limb opened, and Beale's red injecting fluid, well warmed, was introduced under steady manual pressure, while the vital circulation still continued. This was done under the impression that a continuance of the natural capillary and venous circulation would assist in securing a thorough capillary injection by removing obstacles from in front of the injecting fluid. The animal was now killed, and the fractured bone removed with the tissues immediately about it. The specimens were soaked for three days in alcohol, diluted at first one-half, then used full strength, nominally ninety-two per cent., in order to harden the soft parts. They were split longitudinally with a saw through the medullary cavity of the bone, and decalcified by nitric and hydrochloric acids mixed. The acid having been removed by the action of water, the specimens were prepared for the microscope in the usual way,—cut, stained with carmine staining-fluid or "sulphindigotate of soda," treated with alcohol, oxalic acid, and oil of cloves, and mounted in damar varnish. The sulphindigotate of soda, while not otherwise as satisfactory a staining fluid, offered the advantage of leaving the injecting fluid stained purple, which afforded a contrast in the vessels not otherwise obtained.

* * * * * * *

In one section we find, for the sake of illustration, that by the twenty-third day ossification is considerably advanced. Canals, filled with vessels, are seen running at right angles to the long axis of the bone, through the growth which constitutes the external ensheathing callus; at another point may be seen a mass of unchanged hyaline cartilage, vascular as are all temporary cartilages. Osteoblasts are found clinging to the edges of the old bone and at intervals through the fibrous substance, and the transition into true bone may be observed. We find that the cartilage-cells proliferate. Calcareous trabeculæ are laid down, and osteoblasts arrange themselves along them or along the edges of the old bone. These osteoblasts are surrounded with intercellular substance, which is soon infiltrated with bone-salts, as in true bone-formation. There would seem to be in this intercellular substance a kind of vital affinity for bone-salts, analogous to the affinity of the connective-tissue cell of some localities for oil. The tissue which is soon developed shows lacunæ, canaliculi, Haversian systems, and medullary spaces, though all

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may be more or less irregular in arrangement.

We have now endeavored to show that the mode of development of osseous callus is similar to that of normal bone; that the necessary conditions are the same in both cases, and that these conditions exist in both cases. This would seem to be a strong indication in favor of the ultimate products being the same.

We have also shown by the examination of these products in old fractures a most remarkable resemblance between callus and bone, a resemblance such that, in favorable cases, with slides mixed and unmarked, it would be almost or quite impossible to distinguish them.

Finally, then, as the result of the present study, we arrive at the conclusion (1) that in the repair of fractures true bone may be reproduced; (2) that under unfavorable conditions the process may be seriously modified or arrested in various stages; but (3) that there is a tendency to true bone-formation in every case.

NOTES ON JENSEN'S CRYSTAL PEPSIN.

BY HUGO ENGEL, A.M., M.D.,

Fellow of the American Academy of Medicine, etc.

THE following, selected from a large number of similar cases, induced me to write these lines. Of the many new preparations which recently have appeared in the market, there are comparatively so few possessing real value that when we meet with such of the latter class we should not withhold just praise and make their merits known to the profession.

Mrs. M. had been nursing her youngest child, a boy, until he was seven weeks old, when her right breast inflamed. A homœopath who attended her, while allowing the inflammation to proceed far enough to change into a large abscess, forbade her nursing the infant with the other sound breast, because "the morbid material was contained in the milk of either side and would kill the baby." In consequence of this—to give it a mild name—remarkable reasoning and over-cautious procedure, the secretion of milk soon ceased totally,—a result which proved injurious alike to mother and child. As the former does not concern us here, I will mention only that I succeeded, after considerable trouble, in getting her well; but the child, after being weaned, emaciated rapidly, and so much so that when it came, some two weeks later, under my charge, it already suffered from that condition which, in the absence of any other detectable lesion or cause, alone is correctly called marasmus. I regulated the feeding of the infant with diluted cow's milk, to which some sugar and a grain of salt were added. The nursing-bottle in all its parts was scrupulously kept clean, the temperature of the milk a uniform one, and the feeding done regularly every two hours. But when after four days the discharges from the bowels still continued unhealthy and the child to lose flesh and to decline in general health, pepsinum saccharatum in the dose of five grains was added to the milk. For the next day or two the child seemed to be a little better; but when it relapsed into its former condition, first the same dose of Scheffer's and then of Boudault's pepsin, to either of which diluted hydrochloric acid was added, were substituted for the saccharated pepsin, with, however, the same want of success. I then ordered, for the first time in my practice, Jensen's pepsin, gr. ii, with one minim of diluted muriatic acid, to be administered four times daily when the child was fed. Immediately, almost, an improvement began, and the boy grew strong and plump during the following seven or eight weeks. The parents, who hitherto had lived near Second and Green Streets, now moved to Tenth and Fitzwater Streets; and, as it seemed very inconvenient to have the medicine put up by the apothecary in their former neighborhood, from whom they always had procured it before, they asked him for a copy of the prescription, and brought it to a drug-shop not far from their new residence. I had then not seen the child for nearly two weeks. It had taken the medicine prepared at the new place for about five or six days, when again it was brought to me, with every sign of going backward and relapsing into its former marasmic condition. Its decline in health had commenced so simultaneously with the taking of the last medicine prepared by the new apothecary, that I advised the mother to procure the solution once more from their former apothecary. This was done, and again improvement began almost immediately. Some three weeks later, a part of the medicine having been spilled, and the latter suddenly giving out,

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the parents were again induced to buy the pepsin in the neighborhood, when it became apparent to even the most superficial observer that the benefit the child had derived was due to Jensen's pepsin: again the boy's health declined, and he lost flesh; and when the now frightened and thoroughly convinced mother again substituted the old preparation, she once more had the pleasure of seeing her infant thrive.* No further disturbance in the health of the latter took place; the baby looked the picture of health, and when with the appearance of a sufficient number of teeth the child was able to digest a more solid food, the dose of the medicine was gradually reduced in size, until at last the boy continued to do well without the assistance of artificial gastric juice.

Mrs. R. requested me to attend her sixteen-months-old child, suffering from cholera infantum. After I had succeeded, by baths, by the utmost attention to cleanliness, and by insisting upon the little patient being carried about in the fresh air during the cooler hours of the hot summer days (it being July), and by permitting it to make frequent trips in the ferry-boats and steamers proceeding up and down the Delaware, and by appropriate medicine, in putting a stop to the vomiting and the frequent morbid discharges, I administered pepsin in conjunction with dilute muriatic acid, to improve the digestion. But the result was by no means satisfactory until I prescribed Jensen's pepsin, when within a few days a decided improvement was noticed; and, as this continued steadily, I discharged the child as well. About a week later it was again brought to me, on account of a relapse. I then elicited the following. As long as the mother had to come with the child to my office, she had the medicine put up by an apothecary to whom I had sent her; but when the visits to me were discontinued, she considered it too great a distance (living at Twenty-Seventh Street and Ridge Avenue) to send always down town for the medicine, and so she procured it from an apothecary in her neighborhood,—with what effect has been mentioned. I told her what I thought, that perhaps the medicine did not contain the genuine preparation I had ordered, gave her a new prescription, and advised her to have it put up by the former apothecary. She did so, and for all time afterwards, as the immediate improvement of the baby was too apparent not to ascribe it to the medicine. When the child, which continued to grow stout and gradually regained its normal health, was able to take more solid food, the medicine here also was gradually withdrawn, and without any detrimental effect.

Besides these two cases, I will mention, with as few words as possible, two more. One was that of a lady *enceinte:* she was suffering a great deal from nausea and vomiting. Other remedies having been tried, but without success, I prescribed pepsin,—at first, however, with no result at all. I then changed it to Jensen's pepsin, and after the third or fourth dose the disagreeable symptoms had ceased almost. When I discharged her she asked me if she could have the medicine prepared by a relative of hers (she having had the medicine put up so far by my apothecary), as she would get it much cheaper. I consented, but cautioned her to let me know immediately when her former symptoms should return. Her relative evidently substituted a different preparation of pepsin, as the lady, after having taken his medicine for a day or two, returned to me with the information that the nausea had again reappeared, though not as yet the vomiting. At my advice, she procured the pepsin from the former apothecary again. The result was as expected: the nausea ceased again.

The last case which I pick out from a large number was that of a girl, æt. 16, suffering from chlorosis. No matter which preparation of iron I tried, her stomach would rebel: either vomiting or severe nausea would set in, or she would feel a heavy pressure in the epigastric region. I then prescribed Jensen's pepsin with dilute hydrochloric acid to be taken at the commencement of each meal, and the iron about half an hour after the latter. From this time on she was able to take the iron. She also (this being the reason I mention her case) procured the medicine with the pepsin once from an unreliable apothecary, and with the same result as attended the other cases reported: the symptoms of indigestion returned, to disappear again on the resumption of the genuine preparation.

I had frequently tried every imaginable combination to prevent the disturbance of

* The apothecary in their new neighborhood confessed, later, the substitution by him of Scheffer's pepsin for Jensen's.

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the stomach happening in some persons whenever they have to take opium or any of its preparations. I could report a long series of cases in which the annoying symptom ceased on combining Jensen's pepsin with the opiate; but those mentioned above will be sufficient to prove from actual experience that we possess in this remedy a preparation of pepsin superior in every respect to all others of its kind in the market. The following will be of importance to know regarding pepsin preparations in general and Jensen's in particular.

Pepsin itself is a ferment. There has as yet been no method detected by which it would be possible to obtain pure pepsin,* "this alone and nothing else." Every process by which pepsin is manufactured, no matter if by simple digestion and evaporation (primitive, Lamatsch's), or by precipitation with acetate of lead (French, Boudault's), or by precipitation with a concentrated solution of chloride of sodium (American, Scheffer's), results in the obtaining of only a very small percentage of pepsin, and this of very limited strength. It was thought that especially by the latter method pure pepsin would be precipitated; but such is not the case: the albuminoid bodies contained in the macerated stomach are thrown down, and only the property of pepsin to be carried along with any precipitates produced in this solution is the cause of all these preparations of gastric juice containing any pepsin at all. Its unlimited and never uniform dilution with sugar of milk makes this form of gastric juice still weaker and more uncertain in its action. The French pepsin (French Codex, Boudault's) is expected to dissolve twelve times its weight of albumen (hard-boiled), the American (Scheffer's), and the German, about fifty times. A plain arithmetical example gives us the following figures. One ounce of beef contains four hundred and eighty grains: according to the French Codex, forty grains of pepsin, and according to our Pharmacopœia, ten grains, would be necessary to digest this quantity of beef. But, as a healthy person, besides other albuminous aliments, will eat for a meal a quarter of a pound of beefsteak at least, one hundred and sixty grains of the former and forty grains of the latter preparation would be needed for its digestion. How does this coincide with our usual dose of Boudault's or Scheffer's pepsin,—ten grains?

Jensen's crystal pepsin, which has received the name of crystal (not crystallized, as it is often erroneously called) simply from its peculiar glistening, crystal-like appearance, is (without the addition of an acid) perfectly soluble in water, and not precipitated by common salt, therefore a peptone with very great pepsin-effect; "yes, it has proven itself to be the most powerful preparation of pepsin the market offers, one which is capable of dissolving over five hundred times its weight of hard-boiled albumen."† Of its manufacture, which seems to be known thoroughly only by Jensen, we can presume that it is prepared by maceration of the stomach and its mucous membrane in acidulated water at a temperature of 38° to 40°; the albuminoids are changed into peptones (causing in this way the production and gain of all latent pepsin), and by a peculiar process the syrup-like mass resulting is dried on glass, when the "pepsin" appears in the shape of transparent scales.‡ So carefully is the whole process conducted, and so utterly at variance with all previous methods, that the property belonging to all other preparations of pepsin, of containing chlorides, is totally wanting in Jensen's. If to a solution of any other pepsin nitrate of silver be added, chloride of silver will immediately appear as a thick white deposit, while the same test applied to Jensen's pepsin will either be without any result or (due to a trace of muriatic acid) a faint white cloud will show itself. When we reflect upon the large quantity of pepsin Jensen is able to get from a macerated stomach, the absence of chlorine in his preparation, and certain well-known physiological effects of muriatic acid on digestion, the following theory does not seem to be so very absurd to the writer of these lines. There is always only a certain small quantity of pepsin present in the stomach, but a far larger amount of certain albuminoids and of muriatic acid. This latter acid may be in the stomach less for the purposes of any direct action on albuminoid substances to be digested than for the purpose of changing by its chemical action the quantity of latent albuminoid bodies necessary into real pepsin. In this physiological process a change into peptone

* Lecture delivered by Tscheppe, Deutsche Apoth. Zeit., 3 and 4, 1883. Many of the facts mentioned in my article have been gained from this lecture.

† Tscheppe, *loc. cit.*

‡ Ibidem.

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first takes place. If such be the real action of the acid in the stomach, several facts are explained: that the addition of muriatic acid to albuminous food accelerates the digestion of the latter more than an increase in the quantity of artificial pepsin added to the same, and, further, that Jensen's pepsin is free from muriatic acid, because, all the albuminoid bodies (latent pepsin) of the stomach being changed into peptones (the first stage in the transformation of the same into pepsin), all the acid is used up in this chemical action.

In consequence of the great popularity Jensen's pepsin naturally enjoys on account of its reliable and powerful effect and its ever uniform strength, many imitations have been placed on the market, and, to the shame of such apothecaries or through their ignorance, are dispensed as Jensen's pepsin. The fact just mentioned (the absence of chlorine), its perfectly dry, crystal-like appearance, and its total solubility in water without the addition of an acid, will serve to distinguish the genuine Jensen's pepsin from all imitations.

At the University of Pennsylvania,* by Dr. Tscheppe† in New York, by Dr. L. Wolf,‡ of Philadelphia, and many other competent and impartial chemists, Jensen's pepsin has been thoroughly tested and found to possess the power of dissolving more than five hundred (about five hundred and eighty) times its weight of hard-boiled albumen. When therefore of the strongest of all other similar preparations, of the one directed by our Pharmacopœia, forty grains are indicated as the correct dose,§ four grains only of Jensen's pepsin would answer the same purpose. This fact has an important bearing not only on the size of the dose, but also on its cost: the ounce of this pepsin being sold for one dollar and seventy cents, a dose of ten grains would cost only about three cents, and, as one grain of it is equivalent to ten grains of the American pepsin, its great cheapness becomes at once apparent.

When testing any preparation of pepsin for its strength, the albumen should be finely subdivided, the solution acidulated with 0.5 per cent. of the pure concentrated hydrochloric acid, and the whole kept at a temperature of about 103°, which experience has proved to be the most favorable for the effect of this ferment. It actually has never been demonstrated, as yet, what really is the temperature of the stomach during the stage of active digestion,‖ but to judge from analogy, viz., from the well-known high temperature, during digestion, of the blood in the hepatic vein on leaving the liver, at a time, therefore, when the functions of this organ are carried on most actively, and to judge from the temperature of which experimental research has proved it to be, outside of the stomach, the most favorable for the effect of pepsin, there can be no doubt that the heat developed in the stomach during digestion reaches about 103°.

Lastly, I wish to remind the reader that careful investigations have proved these facts.¶

Pepsin alone has very little influence on digestion: its effect increases with the quantity of acid added. Double the dose of pepsin alone will not visibly accelerate the digestion induced by a single dose; but doubling the quantity of the acid (certainly within physiological limits) will cause the digestion to be finished in less than half the time. As a rule, the most favorable effect of Jensen's pepsin can be obtained when to each grain of the latter about one minim of the diluted hydrochloric acid is added, but with the proviso that on account of its being a ferment the pepsin is to be first dissolved in water, and to it in its diluted state the dose indicated of the acid is added, as follows:

℞ Pepsin. crystal. Jensen, gr. lxxii;
Aquæ floris aurant.,
Glycerin.,
Syrup. limonis, āā f℥i;
Cui adde:
Acidi hydrochlor. dilut., f℥iss.
M. S.—Dose: one teaspoonful in four ounces of water to be taken at meals.

No alkali should ever be administered at the same time or in combination with any preparation of pepsin, the slightest

* Report by Dr. Richardson, Med. and Surg. Rep., June 9, 1883.
† Dr. Tscheppe, lecture, *loc. cit.*
‡ Report by Dr. L. Wolf in Jensen's pamphlet.
§ See example above cited.

‖ To determine for myself this question, I made two experiments. I fed two young dogs with about half a pound of boiled beef. Two hours later I rapidly opened the stomach of one dog and inserted a self-registering thermometer. The temperature ten minutes later was 103$\frac{1}{10}$°. The other dog was first chloroformed, and then the same experiment performed. In the latter case the temperature was only 102°, but, as the dog vomited during the procedure and died immediately after, I suppose these causes brought about the decrease in temperature. As the experiments were not conducted with sufficient care, I give the results for what they may be worth.

¶ See article on Œsophagoscopy and Gastroscopy, by H. Engel, Phila. Med. Times, May 19.

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addition of such making the latter inert. Of all the acids, muriatic acid is the most favorable in its effect; then come, in the order named, phosphoric, nitric, and sulphuric acids; the vegetable acids having no appreciable effect.

Jensen's pepsin, when without the addition of incompatibles, administered under the conditions described and combined with the acid as indicated, and in a dose in comparison to the albumen to be digested (1 : 500), will never fail to produce the effect calculated: one can always rely upon the result as gained in the cases first reported in this article, and which were picked out from a large number of similar cases, because it so happened in each case that the accidental substitution of another preparation of the gastric juice, and the consequences following this fact, proved beyond a reasonable doubt the superiority and greater reliability of Jensen's pepsin, which, moreover, has been confirmed by experimental research.

507 FRANKLIN STREET.

A FEW REMARKS ON THE CAUSES AND TREATMENT OF CONSTIPATION.

Read before the Philadelphia County Medical Society, April 25, 1883,

BY WILLIAM R. D. BLACKWOOD, M.D.,

Neurologist and Electrician to the Presbyterian Hospital, Physician to St. Mary's Hospital, etc.

CONSTIPATION is a very common disorder in all communities, and from considerable observation I believe it is specially prevalent in large cities,—this one being no exception to the rule. In fact, my notes show that a greater percentage of such cases have been treated by myself here than in any other place in which my professional services have been called for; and, as my field for observation was a wide one climatically, during a service of something more than nine years of army life, one-half of which—during the so-called "unpleasantness"—was spent in Virginia, Kentucky, and Tennessee, and the remainder in the Gulf States and the far West, with the additional experience of some twelve years in our own City of Homes, I feel reasonably safe in making the assertion, although I consider the fact to be somewhat in the nature of a blot on the fair fame of our metropolis, for it always has been my opinion that the community should be "regular in their bowels," as the laity term it, even though they be irregular in their other habits.

With this long introductory sentence the first part of our subject is reached,—viz., the causes of constipation; and of these three only may at present claim our attention, the first of which is *inattention to proper diet.* Although the teeth of man—and woman too—show him to be omnivorous as to food, the demands of labor, society, and acquired peculiarities of appetite have greatly modified the character of our every-day bill of fare. Children are nowadays permitted to acquire likes and dislikes at table, little whims and caprices are indulged as to taste which should not be permitted by their parents; for I hold that in this respect education should be brought into action, just as in the matter of ambidextrousness with the knife and fork. In the one instance the facile handling of the instruments necessary for the preparation of the food in assisting mastication is a good and easy method of teaching the young how to use more formidable tools later on in life, when apprenticeship to trades, business, or other vocation ensues. Despite theory attributing right-handed dexterity to a greater supply of blood to the left hemisphere of the brain, I contend that there is no need for right- or left-handed workmen, no matter what their task may be; and the earlier the young learn this the better. Precisely so is it with the diet itself. I firmly believe that many delicate constitutions are perpetuated and rendered still more weakly by the failure of parents to compel children to partake of a proper selection of food; such articles as milk, butter, eggs, etc., or compounds containing them, being rejected by young people without sufficient cause, and no effort made by their elders to inculcate the necessity of supplying the needed elements as growth proceeds. The increasing want of reconstituents, medicinally, such as the various cod-liver oil emulsions and phosphatic preparations, in minors, is resultant largely from neglect in this direction. I do not, of course, urge the forcing of unsuitable food upon infants, for there simplicity is the rule; but it is in childhood and adolescence that better respect should be observed in this direction.

In adults, too close adherence to a limited diet is very apt to engender not defi-

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cient development, but constipation; and this is particularly true of hard-working people in stores and factories, where the food, from greater portability, ease of preparation at the time of eating, and too often as a matter of cheapness, is largely farinaceous, with perhaps some slices of cold meat,—this generally being salted or dried,—unless under exceptional conditions, where a full, hot meal, with vegetables, is partaken of at the close of the day's labor. This habitual diet is in itself a factor in the creation of deficient intestinal activity, without taking into consideration the effect of constrained indoor work as tending greatly towards the same abnormal condition. The walk to and from the scene of work is usually the only exercise of this kind taken on week-days, and on Sundays most working-people spend the time at home during much of the year, the church-goers attending service near at hand, as a rule.

Secondly, habit is also closely connected with the prevalence of constipation. Many persons visit the water-closet at uncertain and irregular intervals, and women are specially negligent in this matter, particularly in the higher classes of society. They go only when urgent need compels, and, agile though they may be in the ordinary duties of their households, the calls of nature are too frequently left unheeded until the costive habit is firmly fixed as it can be, and frequently is from this cause alone. It is so with business-men, who defer the duty because a response after breakfast at home may delay their arrival at the office, and, when there, the need is no longer felt, or something needing prompt attention now absorbs time, and the matter is forgotten or deferred to a more convenient season. A large number of people of intelligence do not know or believe that a daily evacuation of the rectum is a necessity to perfect health, and from this they conclude that a day or so additional between-times is no great harm, should travel in these busy days, or an out-of-town jaunt if at leisure, interfere with the visit to their own closet, they not caring to patronize the public latrines on steamboat or railroad-train or to seek the recesses of the woods during a picnic. Delays are dangerous here, as in other affairs, and the constipated habit is readily thus established.

A third developer of constipation is the presence of rectal or anal disease. The pain, amounting to agony in many cases, of fissure, ulcer, or hemorrhoid, is so great, and the torture is so persistent after defecation is accomplished, even intensifying for some hours subsequently, as to compel these sufferers to postpone to the utmost their devotions at the shrine of Cloaca. This procedure soon deadens the sensibility of the bowel, and obtunded feeling thereafter permits the constipation to persist, if not to increase. It is difficult to get such sufferers to listen to argument, or to try remedial measures other than those demanded by radical operation for cure of the causative disease.

The treatment of constipation naturally depends on its cause in each particular instance. Little time need be spent on the division first noted: there the physician must compel the observance of a well-mixed dietary, with special attention to antiscorbutics, and even the most stubborn patients will, through persuasion, gradually change their habit of eating, when the absolute necessity therefor is presented by their attendant. The addition of a light repast just before retiring, in which acid or sub-acid fruits prevail, with raw tomatoes, or the juice of that valuable esculent,—in lieu of the conventional beer, bread, mustard, and cheese,—will frequently stimulate the bowel in the morning when the hot coffee wakes up intestinal action and capillary circulation. I do not admit the ill effect of a late supper,—taken in moderation and of a proper kind,—and no one who knows the English yeomanry can dispute my position, for as types of rugged health and perfect complexion (which cannot exist in people packed with fæcal refuse) they are unapproachable; and they invariably retire on a comfortably-filled stomach.

The second class is harder to manage than the others, for bad habits, though readily formed, are difficult to overcome. Every effort must be made to establish a regular *daily visit* to the closet at a *definite time*,—just after breakfast being the best,—and, although no effect may at first ensue, do not let the patient respond to hints thrown out by the bowels at other periods. Should evacuation not occur to-day at the selected hour, wait, unless uncontrollable desire is experienced, until the *right time* to-morrow. The bowel is susceptible of high education, and it learns

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to obey your behest when persistently solicited. It is usually necessary to assist the sufferer in such instances by medication, partly to conceal the main point,—the institution of a regular habit,—and also to tone up the flabby and debilitated mucous membrane and muscular coats of the lower intestine,—in fact, the whole tract in many instances. This therapeutic addition need neither be frequent nor strong; the great mistake made by patients and physicians alike is in resorting to cathartics under such circumstances. Allusion to the remedies suggested is deferred until after a word about the third class,—constipation from rectal or anal disease.

The proper method here is to eliminate the cause by operation, unless the patient declines positively, when the simplest plan is to employ an enema, and this preferably just before bedtime,—the object being to allow the person to get asleep before any pain shows itself, if possible. In some instances a non-constipating suppository of belladonna and iodoform will prevent the advent of such pain as would avert sleep.

To recur to therapeutics. Two methods are available in assisting the installation of a regular habit, one being medicinal, the other mechanical. My preference in the way of drugs is in most cases to give a single dose at bedtime only, studiously avoiding drastic or powerful cathartics, usually relying upon a drachm of cascara sagrada cordial simply, with one or two drops at most of tinct. belladonna, unless very lax muscular tone is evident, when the same number of drops of tinct. nux vomica is added. The effect is good in any case, but particularly in those persons who imagine that drugs are essential. In scrofulous subjects I sometimes add the one-hundredth of a grain of corrosive sublimate to each dose. In long-standing and stubborn cases I am very partial to the series of resinoids developed within the past twenty years by the eclectic fraternity, and of these leptandrin, juglandin, euonymin, and irisin are extremely valuable in combination in small doses, with at times the addition of ext. hyoscyamus. Should indication present, belladonna and nux vomica can be substituted singly, or the three conjoined. From inquiry among druggists and members of our profession, I find that any interest felt in these preparations in the past has abated, and that disuse of them has ensued, notwithstanding the exhaustive experiments of Rutherford and others, showing the admirable results obtainable from them as cholagogues and deobstruents without the pernicious results of the mild chloride of mercury, so much abused and so blindly resorted to, even at the present, in real or supposed liver-troubles. I have had such excellent results from the administration of these preparations as to urge heretofore and now a return to their use, and I feel the less hesitancy in so doing because of the corroboration of my views by our distinguished associate Dr. Horatio C. Wood, who stands not only unexcelled as a neurologist and therapeutist, but who, by his untiring and unselfish devotion to experiment and study, has thrown light upon many obscure phenomena in pathology, the results of which are appreciated and valued by not alone the profession which he adorns, but by scientists in every land,—a gentleman, withal, to whom supercilious and pedantic egotism, or jealousy, is foreign, and one ever ready with a kindly word for all, and a ready heart and hand for his fellow-workers.

In the way of mechanical treatment we possess important auxiliaries in massage and electricity. Most of my bad cases are directed to apply rapidly, for a few moments, a cold wet cloth to the abdomen, brushing the front and sides lightly, and drying with as rough a towel and with as much friction as the skin and comfort will permit. The patient is now thoroughly, by her own hands or those of another person, rubbed and kneaded over the entire abdomen, with special stress along and over the course of the colon. This manœuvre is exercised for some two to five minutes, the whole proceeding taking place just before the visit to the closet or when soliciting the evacuation. The effect is remarkable in all instances for good, and, when intelligently carried out, of main importance. The chief difficulty is to get patients to faithfully persist in stubborn cases, and to operate in winter, when, as one lady told me, "her belly was cold enough when disrobed, without dosing it with ice-water!" She persisted, however, and lost her constipation.

Electricity is beyond question intrinsically more valuable than any other remedy we possess in restoring tone to the intestine in long-standing cases. Contrary to general rule, faradism is here preferable to

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galvanism; but care is requisite in its application, that painful parietal muscular contraction does not occur. The small type of induction coil (as the Gaiffé) will not answer, the wire of the secondary being so fine as to abolish quantity, substituting therefor extreme tension. Under this condition the current acts mainly upon the integument and parietal muscles, and strong contractions, particularly of the external oblique and rectus, are very painful. To reach the intestine through the abdominal wall it is necessary to use a secondary of rather heavy wire; and my own inductorium is furnished with eight separate coils, six of these being of varying gauge and length of copper wire, one of German silver, and the high resistance of platinum.

With this arrangement, currents of any degree of tension, yet with sufficient quantity, can be had at pleasure, and the penetrating power approaches, though it does not attain, that of galvanism. The current should be rapidly applied over the whole abdomen, much as described in the remarks on massage, one pole brushing gently the parietes and the other over the solar plexus or the anus. The sittings should be frequent, and it is well to have a water-closet handy if you see the patient at your office, for sometimes the effect is prompt, as illustrated by what another of my patients once or twice said to me during the application: "Doctor, I want to go through the house!" that being her way of saying that something wanted to go through her.

I have already prolonged this paper so much (intending it only to fill a sudden gap in our meetings) as to prevent alluding further to points of interest; but as it will, if spun out longer, prove almost as interminable as sometimes happens in the abnormal condition it refers to, I defer further suggestions to some future emergency, thanking you for your forbearance this evening.

246 North Twentieth Street.

THE VIENNA SCHOOL OF DERMATOLOGY.

BY HENRY WILE, M.D.

To the Vienna School of Medicine is due the credit of being one of the first to bring order out of the chaos of facts and observations which characterized the medical science a century ago. One of the main elements in the successful development of this school was the presence of an enormous clinical material. Another element, and perhaps as important as the one just mentioned, was the appreciation and cultivation of this material by master-minds. It is no matter of surprise that such a school became a centre of learning, as it did,—that its fame should go abroad and with peculiar magnetic power attract students from every quarter of the globe. The talents of a Rokitansky, the sagacity of a Skoda, and the genius of a Hebra, were each points of attraction in which the labors and efforts of centuries culminated. After these men passed from among the living their places were filled but in theory. It requires no great effort to see that in the development of the Vienna School, as in the development of every fabric of human society, a period of action is followed by a period of reaction; a period of advance, characterized by power and brilliancy, is followed by a period of decline, in which nothing of importance is effected. At the present time the Vienna School is in this period of decline, and it seems as though the institution were merely resting on its laurels; but in truth it is gathering strength for another advance.

I desire, however, to direct my remarks to the present condition of that department which more specially engages my attention. In no other department, perhaps, was growth so marked and astonishing as in that of dermatology. Indeed, the development of this branch of medicine in the Vienna School furnishes an important epoch in the history of dermatology. The clinic for diseases of the skin first acquired its prominence under the management of Hebra, whose successful leadership extended over a period of nearly forty years.

Hebra, having promulgated his principles against the opposition of his contemporaries,—who clung to tradition and to the wisdom of the ancients,—and succeeding in their establishment, assumed with justice and honor the place of a dictator. His opinions were received as law while living, and dead his writings still command respect.

The master was succeeded by a disciple, and the chair of Dermatology in the Vienna School is to-day occupied by Prof. Moritz Kaposi, a man of unquestioned ability, both as a teacher and as a writer.

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In taking the position, however, Professor Kaposi has pretended to assume all the dictatorial power of his predecessor. This is made manifest both in the method of teaching and in the exclusive character of the principles of the pathology and therapeutics of dermatology which are here enunciated.

The method and manner of teaching is dogmatic in style: it sometimes savors of conceit. It is not long before the hearer becomes impressed with the idea that the good work is being continued only in *Vienna*, and that that which is done outside of the beautiful capital is hardly worthy of honorable mention. Outside authority is only quoted to be brought to task for daring to disagree on some question with the Vienna School. The diseases occurring in this part of the world and brought into the clinic are taken as types which are supposed to exist everywhere, and from which a system of dermatology is expounded that is supposed to hold good the world over; than which nothing can be more ridiculous. To the student travelling in different countries and observing the diseases of the skin peculiar to the countries, nothing is more evident than the differences in type, and especially the relativity in respect to occurrence (frequent or rare), and the degree of severity with which the same disease attacks individuals of different nationalities.

An American student, going to Vienna, sees any number of cases of certain diseases which are comparatively rare in his own country,—*e.g.*, favus, scabies, lupus vulgaris, and others.

Probably, next to eczema, scabies carries off the palm in Vienna, while in American clinics this is far from being the case. Bulkley, in an analysis of eight thousand cases of skin disease, gives but one hundred and twenty-eight cases of this disease, —one and six-tenths per cent. Cases of scabies frequently come into the clinic where, through mistaken diagnosis or delay in treatment, almost the entire surface of the skin of the patient is the seat of a violent dermatitis, caused by scratching. This is called by the significant term *eczema post scabiem*, which is an exceedingly rare picture in an American clinic.

A peculiar fact connected with the occurrence of scabies in the Vienna clinic is that it seems to be confined more particularly to certain classes of apprentices; so that the *Schuster* and *Schneider* boys will have their places in the history of this disease in Vienna. Indeed, a diagnosis may with a fair degree of certainty be made by the simple question of occupation. American students on the front seats at Prof. Kaposi's clinic will whisper "scabies" as soon as they hear a patient say "*Schuster*," and in ninety per cent. of the cases the diagnosis will be confirmed by the professor, who at the same word seizes the hand of the patient and brings the interdigital spaces in close proximity to his eyes. Discovering a burrow, he will march the patient around among the students to demonstrate the same.

Then, again, as to lupus vulgaris. Where but in the Vienna clinic can such a number and variety of cases be seen?—cases where the lesions occupy the mucous membrane of the larynx and epiglottis,—other cases where it is upon the face and extremities,—one case where it involves almost the entire surface of the body, which Prof. Kaposi thinks would be sufficient to furnish clinical material on this disease for several small universities. Cases of psoriasis universalis and prurigo are also common.

In reference to all those diseases common to both clinics, a striking feature presents itself in the fact that they here possess a certain degree of severity which is almost unknown in America. I here recall a conversation that I, before leaving for Europe, had with Prof. Duhring, of Philadelphia, in which he said, "You will see a different class of cases altogether from those you have seen in my clinic. They will impress you more on account of their striking, violent character." This is a fact which soon made itself apparent. I saw several cases of psoriasis universalis in the most aggravated form. One was the case of a little girl about eight years old, in which the entire surface of the skin, except that on the face, was affected.

In syphilitic affections there is no limit to the nature and variety of cases presented. Many of interest were those in which there was an induration on the lip, that was recognized as the initial lesion. One of these cases, a middle-aged man, it was said, came near being operated upon in the surgical clinic for epithelioma. Generally the diagnosis was verified by the treatment, that consisted of the application of a mercurial plaster, which in a short

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time exerted its specific effect upon the induration. Where there is a doubt as to the real diagnosis between syphilis and epithelioma, a retrospective diagnosis is made,—*i e.*, one made after the effect of the mercurial plaster is seen. If the plaster produces involution of the induration, it is pronounced syphilis; if not, epithelioma.

There is perhaps nothing which so eminently characterizes the Vienna School of Dermatology as its system of therapeutics. The successful employment of therapeutic measures in the treatment of diseases of the skin has here led to the development of a system in which a certain plan of treatment becomes identified with each disease, which plan is the result of a rich experience. For example, eczema, with its division into stages, has its special mode of treatment. In one stage, where there is much irritation and swelling, diachylon ointment is recommended; in another stage, where the inflammation has subsided, and the swelling gone down, but where there is still congestion and troublesome subjective symptoms, itching, etc., tar in some form, especially fluid, is prescribed. In the acute stages, where there is considerable weeping, some simple dusting powder, as amylum, is ordered, to absorb the moisture and keep the parts dry and unirritated.

Lupus vulgaris has also its own plan of treatment. The lesions are first washed with strong liquor potassæ, to remove the epidermis, then the new formation is destroyed with nitrate of silver. The stick of caustic is applied with some force, care being taken to dislodge only the diseased tissue, and not to injure that which is sound, remembering that lupus tissue is soft compared with healthy tissue, and easily broken down.

For the treatment of severe cases of pemphigus vulgaris, and extensive burns of the second degree, the continuous water-bath is used. This bath was introduced by Hebra, and consists of a tank in the form of a bed, in which is suspended, by means of chains, an inclined plane. Upon this plane the patient rests. It can be raised or lowered to any angle, by means of a revolving shaft around which the chains are fastened. The top can be covered over with a wire screen upon which a blanket is stretched. In this bath patients remain, eating, sleeping, reading, etc., sometimes for weeks. In cases of extensive burns this treatment is said to be exceedingly satisfactory. The patients complain at first of increased burning pain, but the feeling soon subsides into one of great comfort.

In the treatment of syphilitic diseases of the skin, all the modes ever invented are used for demonstration in the clinic, but the mode specially preferred and adopted by the Vienna School is that by inunction. It is claimed that by it the best results are obtained with the least amount of constitutional disturbance and pain to the patient. Zittman's decoction and iodide of potassium are occasionally administered in obstinate forms of the disease, besides the inunction.

Except in syphilitic disease, very little medicine is administered internally in the treatment of skin diseases; the main reliance is placed upon local applications.

Besides the regular clinic for skin diseases, there is in the same hospital (Allgemeines Krankenhaus) a division for syphilis, under the efficient management of Prof. J. Neumann. In this clinic one may see a great variety of diseases of the skin, but more especially those of a syphilitic nature.

The method of teaching employed by Prof. Neumann is peculiarly attractive and worthy of great merit, on account of the particular attention that is paid to the matter of differential diagnosis.

Thus there are in the Vienna School two large clinics for the study of diseases of the skin, and, as far as the quantity of material is concerned, their advantages are perhaps unsurpassed. The most important point for the student in connection with the clinical study of dermatology is to see a great number of cases, first in order to study the course and development of the respective diseases, and second, having different diseases, resembling one another in their manifestations, side by side, to compare them closely for differential diagnosis. This can be done at the Vienna School of Dermatology; and for this reason alone, if for no other, it will continue to attract students as it always has done in the past.

NEW CUPREA BARK, derived from localities in Colombia where it had not been collected previously, has lately arrived in Europe in small quantities. Large supplies of this important source of quinine will probably arrive in the course of time.—*New Remedies*, June.

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AN OBSTETRICAL EXPEDIENT.

BY V. M. REICHARD, M.D.

THERE is an expedient which I have used with such great advantage that I wish to lay it before the profession, that some other may be relieved as signally as I have been. To illustrate, I will give a few cases:

Case I.—Mrs. W., colored. æt. 35. In labor with eighth child. Always had easy labors. Membranes spontaneously ruptured several hours before my arrival. Pelvis large and roomy. Head rather small. Parts relaxed and os dilated. Pains good, but head would not engage properly. In the interim between two pains, the head would go back, and could scarcely be felt. After waiting several hours, I determined to take her up. Placed her on her knees by the bed, and in about fifteen minutes the child was born. No bad result.

Case II.—Mrs. L., white, æt. 52. In labor with tenth child. Youngest seven years old. Dilatation retarded, pains feeble. Gave chloral and quinine. After waiting several hours, the head engaged, and all passed well until the vertex was about to sweep under the pubic arch. There it stuck. Extension could not take place, and the child could not be born. Her pains were now good, and an extensive *caput succedaneum* was forming. I waited till I feared for the life of the child, when I urged the forceps. To this she strongly objected,—absolutely refused. As a *dernier ressort*, I put her on her knees by the bed. The effect was perceived at once: the anterior part of the head went back against the perineum, and the occiput swept under the arch. The space gained could easily be recognized. The caput had previously covered all the part which could be detected by the finger, but now the cranium could be felt all around it. Extension took place, and she was speedily delivered.

Case III.—Mrs. R., white, æt. 22. Second child. Membranes ruptured. Woman very stout, and abdominal tumor very large. Found head engaged and fitting tightly. When on her back, the fœtus would fall towards the spinal column; when on the side, it would fall laterally. Could not keep it in the axis of the pelvis, and her labor would not advance. Absolutely refused the forceps. Put on her knees by the bedside. In this posture the fœtus kept its position, and, the uterine forces being applied with advantage, delivery was speedily accomplished. This case was complicated with adherent placenta and hour-glass-contraction; but, as she had suffered with this in her previous labor, it could not have been the result of the position.

These three cases illustrate several of what I consider the indications of the knee position in labor. All the writers on obstetrics speak of the advantage to be gained by sitting, standing, and walking around during the first stage of labor.

None, so far as I have seen, advise this. Atkinson* says the position on the knees is used in Ireland. Engelmann† has shown us that the almost universal primitive position is to have the body either completely or partially upright. While preparing this, I was told by an old professional friend that Meigs‡ details several cases where he resorted to this position. In the systematic works of Ramsbotham, Leishman, Churchill, Playfair, Meigs, and Lusk, I have found nothing except the horizontal position recommended for the second stage of labor. In all my cases the dorsal and right and left lateral decubitus were successfully tried, and with no permanent results.

In none of my cases was delivery so rapidly accomplished as in the first. The child was born almost before I was aware of it, and that after I had waited for several hours with the woman in bed. Had the forceps been used in this case it would not have been devoid of danger, as their passage into the uterus would have been necessary. In the second case the delay was due to the rigidity of the parts. The head could not pass sufficiently far back to allow the vertex to sweep under the pubic arch, and hence the delay. By changing the direction of the uterine action the necessary space was gained. With the forceps the same result could have been accomplished more speedily, but she utterly refused them, though urged by myself, her husband, and the nurse. In the third case the delay was due to the relaxed abdomen and the trouble in keeping the fœtus in the axis of the pelvis. When in the upright position there was no trouble of this kind, and her labor advanced to a speedy termination.

In these cases the placenta may be delivered while the woman is on her knees, or she may be put back to bed first. If there is no delay, the better plan is to remove it before putting her back, as by so doing a great deal of filth and dirt will be kept out of the bed. The woman will not be soiled, or compelled (as is so often the case) to lie in a pool of her own discharges. Indeed, one great advantage is the keep-

* Hints in the Obstetric Procedure, p. 36.
† Obstetrics among Primitive Peoples.
‡ Letters to the Class.

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ing of the bed clean. Some women will object to this position because they are too weak, others because it is indelicate; but by stating the case clearly, and using some tact, the attendant ought to have no serious trouble in having his wishes carried out.

FAIR PLAY, MARYLAND.

THE DISPENSATORY OF THE UNITED STATES, FIFTEENTH EDITION, 1883.

BY W. THORNTON PARKER, M D.,
Acting Assistant-Surgeon U.S.A.

WHEN a new edition of a great work like the United States Dispensatory appears, after having undergone careful revision, it must be expected that criticism and even fault-finding will be made in regard to it. I beg to call attention to what seem to me to be some errors and omissions concerning a few medicines which have proved valuable in practice.

Quiniæ hydrochloras (p. 1219). It is stated that "this is another new officinal quinine salt, for the introduction of which there seems to be no good reason, as the medical properties and uses are precisely those of the sulphate."

The valuable properties of quiniæ hydrochloras have been very ably shown by Dr. Mixsell.* I have also added my testimony to its value.† It is useless to claim that the "*medical properties and uses*" of this drug "*are precisely those of the sulphate.*" Careful investigation will prove that the hydrochlorate is very much superior in its action, more rapidly absorbed, less likely to cause disagreeable head-symptoms, and also, from its ready solubility in water, more convenient in practice. In fact, in cases where the sulphate cannot be used at all the hydrochlorate seems to do well.

In Germany, where I first learned to appreciate its good qualities, it is a great favorite. It is best prescribed in capsules. In much smaller doses than the sulphate, it has been found equally beneficial.

Concerning *chlorate of potassium* (p. 1162), there is no distinction made between it and the kali chlorici so commonly used in Germany, which is, in fact, a much milder preparation than the chlorate.‡ The kali chlorici will be found a very agreeable and efficacious remedy in common sore throat, for which it is considered almost a specific; whereas the chlorate of potassium is very apt to be too severe, and to have a very injurious effect upon the stomach.

No mention is made of the use of the *sulphate of magnesia* in dysentery, as recommended by Dr. W. H. Thayer, of Brooklyn, neither is there anything said of the value of *tannate of iron* in diarrhœa. By far too little notice is taken of *dialyzed iron*, and nothing is said of the value of inunctions of *olive oil* in chest diseases.§

Tartrate of sodium (p. 1762), receives some attention. It is, however, best given in the form of Brewer's Effervescing Tartrate of Soda.

Sulpho-carbonate of zinc, although not mentioned, is in fact a very valuable preparation, and is to be preferred to all other astringents for injections in gonorrhœa and leucorrhœa.‖

In conclusion, it is very much to be regretted that *boro glyceride* is not mentioned as an antiseptic. It would surely seem to have won the right to be classed with carbolic acid and iodoform, if not recognized as being immeasurably superior to both.¶ I trust I may be pardoned for taking upon myself to criticise a work to which every physician may be thankful to have access, and which is indeed not only a credit to its compilers and publishers, but an honor to the American medical profession.

FORT ELLIOT, TEXAS, June 2, 1883.

AN EXPERIMENTAL RESEARCH ON THE UTERO-PLACENTAL CIRCULATION.

DR. J. P. PYLE presented as a graduating thesis at the last annual commencement of the University of Pennsylvania a memoir with the above title. It is designed, as soon as practicable, to publish the paper entire, as it seems a scientific contribution of decided value. The conclusions the author deduces are formulated as follows:

"Nineteen experiments were made with ultramarine blue. In each instance the

* Medical News, March 31, 1883.
† Medical News, April 28, 1883.
‡ Medical Record, January 20, 1883; Medical News, May 19, 1883.
§ Medical Times, December 30, 1882.
‖ Boston Medical and Surgical Journal, March 3, 1881.
¶ New York Medical Record, September 2 and 23, 1882.

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blue, which had been introduced into the circulation, was found widely distributed in the maternal organs. The total number of fœtuses obtained from these animals was sixty-one. Of these, forty-six gave positive results, *i.e.*, the fœtal tissues were impregnated with blue granules in varying quantity. Only fifteen of these fœtuses gave negative results.

"Of the placentæ only fifteen were examined, thirteen of these showing blue granules, the remaining two giving negative results.

"Of the thirteen umbilical cords examined, eight gave positive and five negative evidence. I regret that, owing to circumstances beyond my control, the remainder of the cords and placentæ were not examined.

"It is also seen that ten experiments were made with septic poisonings with the object to study the transition of bacteria from the mother to the fœtus. The maternal tissues were in every case impregnated with bacteria. Of the thirty-nine fœtuses examined, in every one identical bacteria were discovered. Eight of the placentæ gave positive results, as well as seven of the umbilical cords examined.

"The control experiments, two in number, made with the object to determine whether or not the bacteria were of an accidental occurrence, gave negative evidence. It is true that putrefactive bacteria do occur in animals after the lapse of a certain time after death, and this I observed in the blood from the heart of the animal which was examined eighteen hours after death. But even here the fœtuses were free of them. Moreover, it can be seen from my experiments that the examinations were made immediately after death, or within a few hours, and that only bacteria pertaining to septicæmia (micrococci) were seen, and not the organisms of putrefaction, which are dumb-bell-shaped and rod-like. The few negative results are certainly of no significance in contrast with the many positive observations, especially in view of the difficulty in making the examinations.

"The observation in the human being, which I had the exceptional opportunity to make, I regard of still greater importance than all the experiments combined. As elsewhere described, I have observed that the bacteridian disease of the mother is transmitted to the fœtus. The examination of the fœtus, which was removed by Cæsarean section, was made one hour after the death of the mother. In this case, also, the bacteria in the blood and tissues of the fœtus could surely not be accidental.

* * * * * * *

"I think that Cohnheim's theory of the migration of white blood-corpuscles, which has lately been proven by himself to be a mere passive process of filtration through the blood-vessel walls, is a fair analogy to what we may find in the transmission of solid particles through the attenuated utero-placental walls."

NOTES OF HOSPITAL PRACTICE.

UNIVERSITY HOSPITAL.

CLINIC OF JOHN ASHHURST, JR., M.D., PROFESSOR OF CLINICAL SURGERY IN THE UNIVERSITY OF PENNSYLVANIA.

Reported by LOUIS J. LAUTENBACH, M.D.

UMBILICAL HERNIA.

THIS woman, apparently about the middle period of life, presents a case of umbilical hernia. This affection, which is also called exomphalos, is quite common in the new-born child, in whom it often occurs as the result of mismanagement of the cord on the part of the nurse or attendants.

In the infant the disease can almost invariably be cured by the adoption of means to keep the sides of the umbilical ring together. The employment of a sole-leather pad or of a copper cent, and the method which I usually adopt, that of Fergusson, by the use of adhesive plaster alone, all are efficient. The hernia is to be reduced, the sides of the ring pressed together, and the part then covered by a few broad strips of adhesive plaster. By such means you can generally effect a cure.

The next class of patients in which we often meet with umbilical hernia is that of women who have borne a number of children. Sometimes the hernia attains a very large size. In one case which I remember, there was a very large protrusion, which consisted of an immense mass of omentum. When the patient sat down, the tumor rested on the chair between her thighs. The hernia was irreducible, and all that could be done was to apply a bag.

Operations for the radical cure of umbilical hernia are sometimes performed, but, like similar operations in other parts, they are attended by the risk of peritonitis,

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and, moreover, frequently fail; so that I do not recommend them.

When we take into account the risk of all these operations, and the fact that the truss affords such a satisfactory means of giving relief, it does not seem worth while to seek anything further.

In umbilical hernia I do not think that the ordinary form of truss is as convenient as an elastic belt with an india-rubber air-bag to be applied over the seat of hernia.

Sometimes the protrusion is not at the umbilicus, but at another part, usually in the median line. This is what is called "ventral hernia." It usually results from some straining effort, as in child-birth, from an injury, or from carrying heavy weights. It is not uncommon in soldiers, in whom it occurs as the result of carrying heavy knapsacks on long marches, necessitating prolonged exercise of the abdominal muscles. In these cases the ventral opening is usually small, and the hernial sac is commonly empty.

If strangulation should occur either in umbilical or ventral hernia, the rule is, if possible, to effect reduction by manipulation or taxis; if you do not succeed by the ordinary method, then make a small incision on one side of the median line, and by means of the probe-pointed knife divide the constricting band, being careful to do this, if possible, without opening the sac. This operation is an application of Gay's method of herniotomy in femoral rupture. If the sac be opened, the operation will almost certainly be followed by general peritonitis.

EPITHELIOMA OF PREPUCE.

Our next patient thinks that he had some form of venereal disease eight or nine years ago, but his history is not very clear.

We see now a condition of great hypertrophy of the prepuce, but not accompanied by true phimosis. We see several openings which discharge a lympho-purulent fluid. At first I thought this might be one of those rare cases of lymphorrhœa, an affection which bears some relation to that form of elephantiasis Arabum which is connected with enlargement of the lymphatics.

There is great thickening and induration occupying the lower part of the prepuce; there is one opening anteriorly, one below, and one above, all discharging a somewhat purulent fluid. When the prepuce is pushed back, we find a great deal of induration and ulceration between it and the glans.

The age of the patient is rather against the suspicion of malignant disease, and yet this is what it appears to be. I do not believe it to be a gumma, as this could scarcely have existed for eight or nine years without change.

By slitting up the prepuce, so as to thoroughly expose the parts, we find that the disease is principally limited to the prepuce, not involving the glans except very superficially. The diseased structures are readily excised, using Ricord's forceps as a guide for the line of section, and introducing sutures before cutting off the affected part, so as to be able at once to control the bleeding.

[Subsequent microscopic examination showed the disease to be an example of epithelioma.—Rep.]

TRANSLATIONS.

Hemorrhagic Pericarditis.—A man, 85 years of age, usually of good health, four days before coming into the hospital complained of a cold in the head, of coughing at night, and of loss of appetite. At the same time, he noticed difficulty in breathing, and his legs began to swell. Upon admission he was somnolent, the face was cyanosed, his pulse was irregular and unequal; the heart was decidedly irregular, and there was dulness with feeble breathing over the base of the left lung. Temperature normal. Dyspnœa increased rapidly, and he died the same evening.

At the autopsy, recent pleural effusion containing fibrin was found in moderate quantity in the left chest. The pericardium was thickened and distended; from it was obtained about five hundred grammes of bloody serum; the inner wall of the sac was lined with a honey-comb deposit of recent lymph; there were no recent or old adhesions. The heart was fatty, dilated, and enlarged, covered by a heavy layer of fat; its muscular tissue was pale, and the walls thin. No valvular disease. The coronary arteries were permeable.

Dr. Butts, who reported the case before the Société Anatomique, in calling attention to the complication of dilated fatty heart with pericarditis, which, indeed,

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generally exists, gives his opinion that in this case the pericarditis was not secondary, but primitive, on account of the rapidity of development of the cardiac symptoms, the abundant effusion being sufficient to cause the dilatation and fatty degeneration. The occurrence of the left-sided pleural effusion he considered as the rule in pericarditis, and as secondary in this case, the relative abundance of the pericardial fluid supporting this view. During life the pleural effusion led the attendant to overlook the pericarditis, the condition of the patient not warranting extended examination; but the sudden appearance of irregular pulse, with œdema, dyspnœa, and cyanosis, should have led to the suspicion of heart-disorder.—*Progrès Médical.*

MULTIPLE FIBROMATA OF SKIN, WITH DEVELOPMENT IN LARYNX AND PERICHONDRITIS—DEATH FROM TUBERCULOSIS.—A case is reported by Th. Hering (*Wien. Med. Presse*, No. 2) of a man whose general surface was adorned by about fifteen hundred fibrous tumors, some as large as a hen's egg, and who also suffered with pulmonary tuberculosis. Subsequently, hoarseness, dyspnœa, and difficulty in swallowing directed attention to the larynx, and led to an examination. A large growth was found in the neighborhood of the left arytenoid, and under the vocal cords was seen a cherry-sized, reddish-yellow tumor, which above was smooth and slightly granulated at its sides, which nearly closed the lumen. Tracheotomy was performed. In a few days a pulmonary hemorrhage occurred, which caused death. Post-mortem examination showed pulmonary tuberculosis. The tumor in the larynx, which was apparently also tuberculous, communicated by a small canal with the necrotic processus vocalis. Near this tumor was a growth as large as a hazel-nut, which under the microscope was recognized as a soft fibroma like that which was found under the vocal cords.—*Centralblatt für Chirurgie*, No. 20.

TUBERCLE BACILLI IN CHILDREN'S DISEASES.—Dr. Demme finds that the catarrhal pneumonia accompanying or following measles and whooping-cough affords exceptionally good conditions for the deposit and development of bacilli. In cases which do become tuberculous the bacilli appear at first isolated in the sputum, but as the tubercular pneumonia develops they become proportionately increased in numbers. The expectoration in acute miliary tuberculosis, on the contrary, does not contain bacilli. In the ulcerative form of lupus vulgaris bacilli may also be detected, although rarely.

In one of those very rare cases of tubercular disease of the nasal mucous membrane reported by Demme (*Berl. Klinisch. Wochenschr.*, No. 15, 1883), bacilli were detected in the nasal discharge. The case is a very interesting one. A boy, 8 years of age, died of an acute meningitis, the autopsy demonstrating tubercular meningitis of the base of the brain. The glands in the lungs, bronchi, and mesentery were free from tubercle; on the surface of the mucous membrane of the right nostril were a few grayish-yellow nodules of tubercle. There was no history of inherited disease. The malady was attributed to direct infection from a nurse who was suffering with pulmonary phthisis, and the opinion is not an untenable one that the bacilli were carried directly from the nasal mucous membrane to the pia mater of the base of the brain, causing the tubercular meningitis.—*Deutsches Medizinal Zeitung.*

TRICHLORPHENOL IN ERYSIPELAS.—The daily application of a solution of trichlorphenol (five to ten per cent.) by means of a brush to an erysipelatous surface has been accompanied by excellent results in the hands of Dr. Jurinsky. With the disappearance of the erysipelas the temperature declines; in several cases this occurred in forty-eight hours after the first application. —*Jeschenedelnaja Klinitschkaja Gazeta*, 1883, No. 5 (Russian), and *Centralblatt für Chirurgie*, No. 19.

PARALYSIS FROM NEURASTHENIA AFTER BILIARY COLIC.—Two cases of hepatic colic accompanied by severe neuralgic pain in the right arm, and followed by temporary paresis of both motion and sensation in the arm, are reported by M. P. de Gennes in *La France Médicale* (No. 55). The neuralgia of the arm was considered as consecutive to a neuralgia of the phrenic nerve.

PRECOCIOUS DEVELOPMENT OF UTERINE CANCER.—In *Virchow's Archiv* (B. xcii. H. 1), Prof. Rosenstein reports a fatal case of carcino-sarcoma uteri in a child two years of age, in which symptoms had first been noticed three months before.

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PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, JULY 28, 1883.

EDITORIAL.

CHOLERA ADVICES.

THE daily dispatches from the East giving detailed accounts of the spread of the cholera epidemic are naturally exciting much attention, if not alarm, in this country, as well as in Europe. Side by side with the reports of its progress in the columns of the daily press, advertisements of cholera specifics have commenced to appear, and in the editorial columns are found words of counsel as to the best means of treatment in cases attacked by the disease, and how to behave during the epidemic, which, while they indicate the popular interest in the subject, are very far from being reassuring to the public. This feeling of an impending danger is so universal that in the choice of summer-resorts families are now taking into consideration hygienic conditions more generally than probably was ever done before. In so far as this leads to increased private and public attention to the practical application of the principles of sanitary science and state medicine, and a better appreciation of their importance, it is calculated to do a great amount of good. Public sentiment for the time supports the various health-boards, and means will be willingly provided for the needed improvements and details of sanitation, which on ordinary occasions are too commonly treated by communities with indifference and neglect. The impetus given to sanitary work may, therefore, to some extent be regarded as an indirect compensation for the existence of epidemics; the influence for good thus transcending the actual limits of prevalence of the disease, just as electrical disturbances extend far beyond the track of a storm.

The history of previous epidemics of cholera shows that a number of years have, usually, been required for its progress around the world. The great epidemic which commenced in Jessore in 1817 did not reach England and the United States until fifteen years later. Since that visitation, however, there are good grounds for believing that the disease has become endemic in many of the large centres of population both in Europe and America, and, where the conditions are favorable for its development, cases of greater or less severity occur in such places every year. Having finally become naturalized in the country, it has been observed that later epidemics are much more extensive and rapid in their march than the first, which took six months to travel from the Atlantic coast to New Orleans. On the other hand, it must be remembered that the means of inter-communication have been greatly multiplied and modes of transit are more rapid and less restricted than ever before; so that the cholera in its march no longer moves in stately course with the slowness of a caravan or the steps of Salathiel.

The probabilities are that the epidemic, if it is to come here at all, will not reach us before next summer; the injudicious attempts to create a panic among the people by sensational publications should therefore be discountenanced by the medical press, at the same time that every encouragement is given to the general adoption of prophylactic measures and the enforcement of sanitary requirements, especially among the great cities along the seaboard.

Authorities generally are agreed that the great carrier of contagion during cholera epidemic is an infected water-supply. The Broad Street pump during the invasion of 1854 in London has become almost classical, since the conclusive demonstration of Dr. Snow, as the local source of many cases of the disease; and Frankland and others have shown that the mortality from cholera

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in London during the last two epidemics was connected directly with the amount of contamination of the water. It is generally directed, therefore, that when cholera is epidemic all drinking-water should be boiled previous to use; and careful attention to this would doubtless reduce the number of patients. But attention to the drinking-water is not enough; *all* water employed for household purposes should be raised to the boiling temperature, in order to render the disease-germs innocuous, before it is used. As pointed out by Lebert, it is just as important that the water used for washing dishes should be germ-free as that which is used for cooking or drinking. We consider it of especial importance that dairy-men and dealers should conscientiously refrain from diluting milk with water which has not been previously boiled, even though every other precaution be taken to insure its purity; but we know of no means of enforcing such a necessary measure.

The Schuylkill water, enriched by the drainage of a large and well-populated section of the country, is still not so very bad; the volume of water is so large, and other natural conditions are so favorable to the purification of the water, that the danger of sickness from this source is not so great as in some other great cities similarly situated. But there are still to be seen in certain parts of Philadelphia, at the corners of streets, pumps, the clear, cool waters of which, sparkling with nitrites, are much sought after by neighbors, and by thirsty laborers on their way to work. There are also, in the cemeteries around the city, pumps from which infusion of dead ancestors is constantly drunk by thoughtless or reckless visitors.

We are reminded that Pasteur found that the earth in which the carcass of an animal dead from splenic fever is buried becomes infested with active germs, which may be even carried to the vegetation above it, so that other animals grazing in the vicinity may thus be infected with the disease. Dr. Domingos Freire insists that burying-places are hot-beds for the growth and dissemination of yellow-fever germs, and demands that the bodies of all persons dead of yellow fever shall be cremated. It would undoubtedly be advisable to carry this out as a measure of public safety in all cases of infectious disease; but as long as these bodies continue to be buried, it seems worse than blind folly to allow unsuspicious children to drink the water that percolates through a crowded grave-yard. We hope to see every pump that is in the closely-populated portion of the city at once removed, and on strictly scientific and sanitary grounds call for the passage of an act with severe penalties against the use of pumps in cemeteries, whether we are to have an epidemic of cholera or not.

*

SUMMER DRINKS.

IN looking over the mortuary records of Philadelphia of some years ago, attention is arrested by several cases of "death from drinking cold water;" subsequently the statistics are silent on the subject; there are no more deaths attributed to this cause. To the thoughtful mind, there is food for reflection here. Were there reasons why water-drinking was especially fatal at that period? If not, why are no more cases recorded? Has cold water lost its fatal properties, or have we ceased to be a water-drinking people? Possibly the coroner at this early date had not yet discovered that most prevalent and convenient condition, "fatty heart," which, at the present day, is so generally returned as the cause of sudden decease. It is also more than probable that people still die of cold drinks during hot weather, the proximate instead of the exciting cause being entered in the death certificate, such as syncope, congestion, collapse, diarrhœa, etc.

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Although a fatal result may not occur frequently, yet there is unquestionably much sickness and suffering caused by the American habit of freely using iced drinks in hot weather for the purpose of reducing bodily temperature when overheated by exertion. That they are popular may be inferred from the signs displayed along the streets intended to attract the public, such as "Soda-Water with Ice-Shavings," "Ice-Cream Soda," "Mineral Waters at 32°," "Ice-cold Brown Stout," "Beer on Ice," "Iced Lemonade," "Iced Tea," and a host of others, with which men insult their stomachs even during the process of digestion.

The excessive use of ice-water during the summer appears to be one of our natural characteristics. How many cases of shock, collapse, acute indigestion, colic, supposed summer cholera, and diarrhœa have been caused in this way it is impossible to compute. That permanent digestive troubles may also ensue is a matter of common experience, and thus life be made miserable, and materially shortened, even though death be not immediately caused.

While protesting against the current abuse of iced beverages in hot weather, which we feel bound to do from observation and experience of their bad effects, we would recommend a more temperate and rational employment of ice. It is not necessary that fluids should be cooled to the freezing-point in order to be acceptable; the ordinary temperature of cool spring-water is usually as low as can safely be drunk in summer with due regard to the stomach. Soda-water as commonly sold may be not much better than poison, as it too often is contaminated to a dangerous degree with copper, as stated by a correspondent in our last issue. Koumyss ought to be more popular as a summer drink; and fresh buttermilk, or sweet milk and Vichy water, would be very acceptable, and, at a reasonable temperature, not injurious. Sweet cider in moderate quantities, genuine raspberry vinegar, lemonade, are also grateful and refreshing. The only objection to lager beer as a summer drink is the alcohol which it contains. The great desideratum for a popular summer beverage we should consider to be one that shall have the pleasant bitter taste of beer without the heating effects of the alcohol. The bitter is a pleasant tonic, but in this form the drink may be regarded by some as too tonic.

THE THERAPEUTICS OF SEA-BATHING.

THE fact that many persons derive great benefit from sea-bathing shows that it is capable of modifying nutrition in a decided manner; and, in truth, its hygienic and restorative effects have long been recognized and appreciated. Since the tonic and invigorating qualities of the sea are so evident in some cases, it is quite possible that in conditions where it is unsuitable it may be equally potent for harm; and physicians have frequently had brought to their attention patients who had thus been injured rather than benefited. It would seem as if the personal factor must enter into the determination of the problem, and idiosyncrasy very largely affect the results; but there are certain general conclusions founded upon experience, which may serve as a guide when the family physician is called upon for his opinion as to the effects of sea-bathing in a particular case. There are, however, so many incidental and necessary conditions to be taken into consideration that, after all, very much must be left to the prudence of the bather. The water varies greatly in temperature: on some days it is quite warm, on others it is so cold as to cause considerable shock; it is sometimes rough and sometimes smooth; the advisability of bathing is necessarily very much influenced by such circumstances. Generally speaking, the effects of sea-bathing are unfavorable to

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ASSAYED DRUGS AND PREPARATIONS.

THERE are many crude drugs and preparations which may vary considerably in the amounts of active and consequently valuable constituents and yet present no reliable physical indications of these variations. Thus it is impossible, except for an expert, to say whether certain *calisaya barks* are true or spurious, or whether they contain the proper amounts of quinine. In like manner the amount of morphine in moist or dry *opium*, the quantity of valuable resin in *virgin scammony* and *imported resin of scammony*, the amounts of quinine or strychnine, or both, in the various *scaled salts of iron*, the real amount of pure nitrous ether in *spirits of nitrous ether*, are all questions which can only be answered after a careful chemical analysis has been made. In like manner *sulphate of quinine* and *sulphate of morphine* should never be sold unless they have been carefully examined in order to detect fraudulent additions or the presence of unallowable amounts of impurities.

It is our uniform custom to subject all of the above articles which are sold under our own name and with our guarantee, to a thorough chemical examination. We find that a rigid adherence to this rule has resulted in good, not only to ourselves but to our customers. We are able to understandingly recommend and guarantee these important medicinal agents, and our customers, the druggists, can in turn unhesitatingly recommend goods bearing our brand to physicians.

It must not be inferred that the above goods are the only ones which we assay. All the most important products of our laboratories which are susceptible of accurate assay are carefully tested, and every precaution is taken to prevent errors and to insure the highest quality.

It requires no labored argument to convince the physician that these safeguards are important, and serve to protect him as well as his patients. Other things being equal, the physician who uses the best medicines will have the best success. We notice with pleasure that there is a decided movement among leading physicians and pharmacists in favor of greater purity, definiteness, and simplicity in the articles used in medicine. It is our intention to furnish just such goods, and we respectfully ask a careful examination of all articles of our production.

In future communications we shall speak more at length of the individual preparations which we offer.

W. H. Schieffelin & Co.

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persons of delicate constitution, and to those in whom for any reason reaction does not take place readily. Young infants should not be taken into the surf on this account, and larger children should not be allowed to remain in until they are chilled. Sea-bathing, on account of the stimulating impression upon the nervous system and circulation, should not be undertaken during active digestion, nor at any time by plethoric persons or those in whom congestions of internal organs are to be feared. Among contra-indications may be classed marked diseases of the kidneys, liver, heart, or brain; and menstruation and pregnancy are conditions as unfavorable as albuminuria. Persons subject to hæmoptysis must use great caution in bathing in the sea; and anæmic subjects are liable to have symptoms of collapse from imperfect reaction. In elderly persons with rigid arteries, when the system is unable to react promptly, a bath may be attended by serious consequences, and, if the degeneration of vessels is decided, syncope or apoplexy may occur while in the water, or a fatal congestive chill may follow.

The question whether a phthisical subject will be benefited at the sea-shore, should be answered with caution. Undoubtedly some cases have been greatly benefited; it is also, unfortunately, true that in many others the downward course is only hastened by the bracing, moist sea-air. If the disease be at all advanced, the chances are that the sea-shore would, as the rule, be a bad place for a consumptive; if, on the other hand, the disease is just beginning, possibly the favorable influence upon general nutrition may more than counterbalance the evil effects upon the lung. To persons in ordinary health, who have been fatigued by business cares and overwork, or to others recovering from sickness, under suitable precautions and proper care sea-bathing exercises powerful and prompt restorative effects. It increases tissue-change and excretions, and is therefore a valuable alterative; it improves the appetite and favors digestion, and is therefore a tonic; it quickens the circulation and invigorates the nervous system, and is therefore a general stimulant; but these advantages apply only to appropriate cases; in others injurious effects more or less permanent may follow.

NOTES FROM SPECIAL CORRESPONDENTS.

CHICAGO.

THE committee appointed by the Chicago Medical Society to confer with the State Board of Health, for the purpose of securing the appointment and organization of a State Board of Medical Examiners, made a report at the last meeting of the Society. The committee, after careful investigation, decided that the necessity for such a Board was beyond any question, as the present arrangement too often defeats proper regulation of the Practice Act. The purpose of the new Board would be the examination of *all* persons proposing to practise medicine in this State, independent of any documentary evidence presented; and, to secure impartial action, the Board is to be constituted of able men having no connection whatever with the medical colleges. The committee in their report present, as the result of an examination of the files in the office of the Secretary of the State Board of Health, the following as a specimen:

———, ———, ILL.

"TO THE SECRATARY STATE BOAR OF HEALTH DEEAR SIR I sent you my dipluma early last march and have not heard from it sinc did you receive it or do you know anything about it I am becoming quite anxious concerning its safety My dipluma is from ——— Medical College ——— dated ——— 1882 I also sent you a letter containing a one dollar bill to pay for the certifficate If you will give me the information I requist I shall be greatly obliged to you

Your's very respectfully

——— ———, M.D."

"It is a sad reflection, that a man who has misspelled above ten per cent. of the words of this simple letter above quoted, holds a diploma signed by the faculty and officers of a recognized medical college."

The committee state that they have the authority of a member of the State Board for saying that there are on file in its office

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not less than two hundred instances of graduates in medicine who cannot spell "diploma." The following examples of the different ways are given: diaploma, diplomy, diplomer, diplomah, diaplemy, diapluma, dipluma.

To secure a better spelling of this word, it is proposed to have one common Examining Board on preliminary education, for all the medical colleges in the State.

The annual meeting of the Board of Directors of the Chicago Floating Hospital Association has just been held, and an efficient staff of officers elected. The hospital boat will run during July and August, making three trips daily. The number of mothers and children receiving benefits last year was over nine thousand.

June 21, 1883.

PROCEEDINGS OF SOCIETIES.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

A CONVERSATIONAL meeting of the Society was held at the hall, northeast corner of Thirteenth and Locust Streets, on Wednesday, April 25. Dr. Horace Y. Evans read his address as retiring President, as follows:

ADDRESS OF THE RETIRING PRESIDENT.

MR. PRESIDENT AND GENTLEMEN,—Having been honored with the office of President of this Society, I now, in compliance with your established custom, beg leave to present my retiring address. The year just closed has been marked by an increasing interest in the advance and development of our knowledge of the art and science of medicine.

It has been my privilege to attend the meetings of this Society for nearly twenty years, and never during that period has there been such an earnest delving and progressive spirit as is now manifested.

We seem to be on tiptoe, sceptical of the present, scanning the future; rejecting the old, adopting the new; advancing on the untried, falling back upon the accepted; again advancing, reconnoitring in the dark, feeling our way; catching at straws, watching the atoms, interrogating every ray or spark as to its ability to enlighten the mystery; expunging the canons of the fathers, yet eager to unearth and scrutinize the old foundations; shy of empiricism, yet at times coquetting with her, knowing that the wrecks marking her blind career have revealed to us both Scylla and Charybdis.

In no branch of science has the investigator such a labyrinth to explore, or such complex laws to discover and organize, as has the devotee of the curative art. He has to deal with the being made after the likeness of its divine Creator, wonderful in beauty, consummate in perfection, and complex in organism, possessing a dual life, psychical and physical, coexisting the one with the other, and fully comprehensible only to its author.

Need we wonder, then, at the superstition and mystery enshrouding the early history of medicine? Does it not magnify our mission when we recall the fact that the ancients deemed it so divine a pursuit that none but the gods could comprehend it? For centuries the mythological deities, Isis, Horus, and Apis, monopolized the entire realm of medicine, only occasionally revealing its mysteries to favorite priests in their temples.

To these men was committed the practice of medicine. They were the magicians in the times of the Pharaohs, and were, indeed, the powers behind the thrones, dictating to kings. To the Greeks we are indebted for having presumed to grasp the divine knowledge and brought it within the comprehension of mortals.

Since then its history has been one of constant travail, pregnant with vital realities, yet tedious and laborious in development, requiring eternal vigilance on the part of its devotees.

Pythagoras, Hippocrates, Celsus, and Galenus labored not in vain. Each faithful worshipper at the shrine received new inspiration.

To-day the accumulated facts of ages are at our disposal. Still there are labyrinths to explore, and problems to solve. Never were the prospects brighter. Never were the times so auspicious. Let us, therefore, not flag in our high mission.

Long may this spirit of progress, so characteristic of our times, continue; and may the meetings of this Society ever be the real post-graduate or polyclinic,—the rendezvous of the old and the young, eager to teach and be taught.

During the year 1882 the Society held thirty-one meetings. Sixty-six papers and reports were presented and discussed.

Thirty-six new members were added to the roll, making the entire membership on January 1, 1883, three hundred and seventy-nine. With these favored data, and this bright outlook, I would fain close my address.

But, sir, a profound interest in the future success and harmony of this Society impels me to sound out a note of alarm.

A serious question is being agitated in the Society, disturbing its harmony and threatening to restrict its usefulness.

I refer to the efforts being made by a few members to introduce women to membership, the consummation of which will mar the administration of any President. The arguments advanced in its favor by the supporters of this new departure are as flimsy and transparent as the professed motives instigating it.

I charge the movers in it with forgetfulness

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of the promise made on their introduction to membership.

The renewal of this obnoxious subject is not promotive of, nor can it in any way advance, the interests of the Society. On the contrary, it disturbs the unity of feeling, it divides the members into parties, and has already created a resort to parliamentary intrigue, which is always demoralizing to any association.

Mr. President, there are gentlemen in this Society who conscientiously believe that mixed clinics, mixed classes in teaching, and mixed audiences at lectures on certain subjects in medicine are demoralizing, debasing, and disgraceful.

And, sir, I envy not the men who can stand upon this floor and indiscriminately support either. The presence of women at our meetings will so outrage the sense of delicacy and propriety of some of us, that we will be forced to withdraw therefrom.

I therefore appeal to every friend of the Society to exercise his personal influence in every honorable way, to banish this ferment which has already so soured our feelings.

Dr. W. R. D. Blackwood read a paper on the "Causes and Treatment of Constipation" (see p. 753).

DISCUSSION ON CONSTIPATION.

Dr. Benjamin Lee said that it is unfortunately the case that while in infant life the movement of the bowels is so easily accomplished as to be an evident source of pleasure, the adult often finds the same function difficult and painful. Ripeness in years and daily repetition seemed to render the individual less expert. The author of the paper has given one reason for this in the fact that children are allowed to eat unsuitable food. American youth are undoubtedly the most spoiled in this respect. They are allowed to eat exactly what their parents eat, and they suffer more from indigestion and constipation than the youth of any other nation.

To secure regular movements of the bowels, persons have been advised to eat bran bread, fruit with skins on, etc.; but these are, in his experience, the cause of dyspepsia, often taking the form of heartburn. Dr. Blackwood is right in his suggestion that purgatives are given in too large doses. The so-called resinoids are useful in small doses. Aloin, for instance, can be used in doses of one-tenth of a grain, daily, as a laxative, with much benefit; and four-tenths of a grain is an efficient purgative. He has also employed with marked benefit, in hemorrhoidal cases, a pill composed as follows:

Pulv. rhei, ʒiv;
Pulv. aloes, ʒiij;
Pulv. myrrh., ʒij;
Sapon. Hisp., ʒiiss;
Ol. cajeput., ʒj.

The powders were rubbed together and the soap then worked in, afterwards the oil. The well-mixed mass is kept in tight bottles. The fresher it is, the better. Three grains of this mass makes an effective pill, which is non-irritating, and may be used a long while without diminishing the susceptibility of the intestines, and often with positive benefit to the hemorrhoidal affection. Cascara sagrada in two-grain doses is also beneficial.

Cases of constipation may be treated successfully by mechanical means. Massage will undoubtedly cure; but the patient must have daily treatment, not only to the abdomen but also to the lower limbs. Vibration of various viscera is a beneficial method. Dr. Lee makes use of an apparatus for this purpose. The patient lies with the portion of the body that is to be vibrated resting on a firm cushion, which is supported by a bar that can be thrown into vibration. The speaker detailed the case of a clergyman who suffered from meningeal congestion, and in whom the bowels were very irregular, the fæces small in amount and of light-brown color, hard, dry, and scybalous. He used the vibrator over the liver on two successive days. The next day the fæces became abundant, soft, and dark green. The benefit has been permanent, and the patient's general condition is steadily improving.

Dr. Dulles recalled the fact that some years ago Dr. Lee had advanced the view that the usual shape of the water-closet seat is not satisfactory, and that a seat with a slit-like opening would be better. This view has much in its favor; and it would appear, further, that the sitting position is not the best for defecation, but that movement of the bowels can be most easily attained when the individual assumes the physiological or squatting position. He had found this position of assistance in overcoming constipation. He did not agree with Dr. Blackwood that constipation is promoted by vegetable diet. On the contrary, he thought that meat diet is responsible for many digestive troubles. He has relieved constipation by a diet of starchy substances. These seem to be provided by nature with a moderate amount of nutritious material in a considerable bulk, so that when eaten they shall leave a considerable residue, the very bulk of which facilitates its expulsion by the bowel. A common method of attempting to get rid of dyspepsia is to limit the diet; and this is often—especially with men of sedentary habits—a cause of constipation, as the bowels, in such cases, have not sufficient mass to act upon.

Dr. Stubbs said he has found the use of coarse oatmeal, thoroughly cooked, taken in cold milk, with or without sugar, or with salt, to be of benefit in preventing constipation. Dr. Jacobi, of New York, uses fine oatmeal, cooked in water, and given in milk by the nursing-bottle to infants; and, conversely,

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when the bowels are loose he uses fine barley as a corrective.

He has found the free use of the enema of warm water and a little castile soap beneficial. In cases of inflammation of the bowel cold water should be used. Enemas secure two benefits: they unload the bowel and are antiphlogistic. They are especially suitable in cases of dyspepsia in which medicines are not well borne by the stomach. They have, however, the objection that they may obtund the sensibility of the bowel if too freely used.

Dr. J. C. Morris said he was not anxious about securing a special regularity or frequency in the movements of the bowel, unless signs of constipation were shown; then treatment was called for. He agrees with Dr. Dulles that constipation is promoted by want of bulkiness in the food taken. This is the case with the milk-diet system. It is not the milk that constipates, but the lack of solid matter in the intestine. Many persons are constipated because they do not take enough liquid food. The action of the kidneys is often delayed from the same cause. As a remedy for constipation, he has found good effects from a small enema of water, about an hour before the expected opening of the bowel. Regular movement can be obtained by the use of about two bulbfuls (two to four fluidounces) of cold water or flaxseed tea. If the bowels are not moved in an hour or so, another enema may be taken, this time about one or two quarts, so that the bowels shall be somewhat distended. By this means a movement will be secured.

Drastics are unadvisable. They may occasionally be necessary, but only rarely. A teaspoonful of flaxseed tea swallowed at bedtime often proves a very useful laxative.

Dr. Hamilton referred to the benefits which have been noticed to follow the use of small quantities of Epsom salt, or even common salt, taken every morning.

Dr. Glasgow thought that enemata would accomplish a great deal. A simple form for giving them was a rubber bag with tube attached. The bag being hung up, the water, by its weight, would flow into the bowels under moderate pressure.

In closing the discussion, Dr. Blackwood said that time did not permit him to notice many important points, some of which he was glad to hear referred to in the discussion. He based his opinion as to a vegetable diet being unwise in many instances not upon theory, but upon observation of the hands employed by one of his brothers: out of some thirteen hundred operatives the large majority who relied upon vegetable and especially farinaceous or starchy diet were generally constipated. A bulky loading of the lower bowel exists in many cases of chronic diarrhœa, the liquid discharge passing around or even through the impacted mass.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

Tumor of the sciatic nerve. Presented by Dr. G. DE SCHWEINITZ.

THE following case occurred in the hospital practice of Prof. John Ashhurst, Jr., and it is by his permission that I exhibit the specimen. The patient from whom this tumor was taken is at present an inmate of the University Hospital, and gives the following history:

On June 16, 1864, owing to a gunshot wound of the right thigh, he sustained an amputation of that member at the junction of the middle with the lower third. The flaps sloughed, and a few weeks later a re-amputation became necessary. This stump healed, but was somewhat conical in shape and never from the very beginning comfortable, being subject to frequent attacks of severe neuralgic pain. Within a year from the date of the amputation, a small lump, tender to the touch, was noted, situated posteriorly and a little to the outer side of the stump. The pains now became more severe and more frequent, and were of a "jumping" character. The tumor increased slowly in size until three years ago, when its growth became more rapid, and at the same time the painful nature of the affection more pronounced, until lately the suffering was wellnigh unbearable. Finally the growth assumed the size which you see it now presents, and on the 12th of last month Dr. Ashhurst removed it; since which time the patient has been free from all pain, except such as naturally accompanied the healing of his wound.

The growth is an irregularly-shaped mass, about as large as a small hen's-egg, having an external envelope of adipose tissue, loosely held together by connective tissue. On section the interior is seen to be a somewhat elastic, rather dense-looking growth, of whitish color, over which pass a few yellowish fibres, probably strands of the sciatic nerve. Microscopic examination of the true tumor-mass shows an entire absence of any nervous element, a section exhibiting fat cells, fibrous tissue, some spindle cells, and numerous free nuclei near the enlarged and dilated blood-vessels.

The tumor would, of course, be classed clinically as a neuroma following amputation, while in truth its pathological nature is that of a fibroma. It is interesting that a growth causing so much pain should be without any demonstrable nervous endowment; and surgically it is further worthy of note, because its removal was attended by immediate and probably permanent relief to the patient, a desired result which is by no means always obtained by the excision of these growths.

Dr. LAURISON, by invitation, made some remarks upon the bacillus tuberculosis, and exhibited a number of specimens. He said

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that he did not employ nitric acid in preparing his specimens, as it seemed in many cases to bleach out all the bacilli from the tissues, but uses formic acid in the proportion of one pint of formic acid to two pints of alcohol. It was a curious fact that the bacilli occurred in patches, while in other parts apparently equally diseased they were present in small numbers.

THURSDAY EVENING, JUNE 14.

The President, Dr. TYSON, in the chair.

Kidneys and heart from a case of chronic Bright's disease; extreme uræmic dyspnœa; œdema; relief by acupuncture. By J. H. MUSSER, M.D.

R. T., æt. 35, admitted to the University Hospital July 17, 1878; single; a packer of goods; frequently exposed to draughts while in profuse perspiration. Used tobacco to excess, and was occasionally intemperate: once or twice a year he would "spree." At twenty-two he had a chancre (?); no secondary symptoms. Three times he had gonorrhœa. Always healthy prior to present illness; never had rheumatism.

The patient inherited a tendency to phthisis from both parents, and to rheumatism from his maternal grandmother.

The onset of the present illness was observed two years ago by a sudden night attack of dyspnœa. The dyspnœa continued for nine weeks, worse at night, and preventing work in the daytime. Œdema of the feet and frequent micturition accompanied the dyspnœa. He improved, to have a relapse in four weeks of a month's duration, followed again by temporary improvement and a third relapse. From the latter he never rallied,—œdema, cough, dyspnœa, frequent micturition, and dyspeptic symptoms being constantly present. The cough was dry and attended by substernal pain. The œdema was general. When admitted to the hospital, under the care of Prof. Pepper, his condition was as above mentioned. During the July, August, and September following, the asthmatic attacks continued. In October they were relieved, but the anasarca became more pronounced.

It may not be out of place to say that the dyspnœa was very severe, and almost defied treatment. It presented the clinical characters of uræmic asthma, and was relieved only by inhalations of nitrite of amyl or by hypodermatic injections of morphia. The anasarca was very great, and not relieved by diuretics, diaphoretics, or cathartics. In October acupuncture was resorted to, with temporary relief to the lower extremities and scrotum,—its good effect lasting five days only, but being so marked as to encourage one in its use. During the following three months the punctures were made about fifteen times, and after each operation about three pints of serum would drain away. The latter part of December erysipelatous inflammation developed about the punctures on the right leg and extended over it. During the progress of the inflammation large bullæ would form, the bursting and continued free discharge of which caused an entire disappearance of the œdema of both legs. Relief was not only afforded by these operations to the œdema, but the attacks of asthma notably diminished in frequency and severity. January 8, two weeks after the inflammation of the right leg developed, sloughing took place. The sloughing was confined to the calf of the leg, was deep, and was attended with free *serous* discharge from the ulcers. In a few days a low typhoid state set in; he rapidly lost strength, and on the 7th of February died of exhaustion.

When these notes were taken (January 8), the remaining features of the case were as follows. He was emaciated and anæmic, and his skin was harsh and dry, his countenance anxious; appetite poor; flatulent dyspepsia marked; the bowels constipated; hemorrhoids; tympanitic abdomen; slightly-enlarged liver; normal spleen.

At the apices of the lungs diminished expansion; fluttering, impaired resonance and increased fremitus at the left; moist crackling and subcrepitant râles heard throughout the lungs. Apex-beat of heart in sixth interspace one-fourth inch inside of nipple-line. Veins of right side of neck enlarged. Cardiac impulse moderately strong. At apex a low-pitched systolic murmur; muscular element lessened. At base pulmonary second accentuated.

The width of the cardiac area of dulness was increased one-half inch to the left, and was not changed by full inspiration.

Urine contained albumen; amount varying, at times two-thirds, then one-third bulk. Hyaline and numerous granular casts.

Ophthalmoscopic Examination.—Small disks. Myopia. O. D., disk dirty-gray. Veins tortuous. No marked change in the color of the nerve-outlines, misty and slightly swollen. O. S., disk same, but more marked. No hemorrhage in either eye. Diagnosed incipient neuritis.

Autopsy, five hours after death.—No rigor mortis; emaciated; commencing ecchymoses. Great fulness of the venous circulation.

Lungs.—Apices bound down by adhesions. Slight right hydrothorax. Base of left lung, anterior and posterior, adherent. At left apex three or four areas of catarrhal pneumonia.

Heart.—Weight, twenty-one ounces; left ventricle-wall hypertrophied; mitral valve insufficient, admitting almost three fingers, its cusps thickened; one leaflet of the aortic valve slightly diseased; left cavities increased in size. Aorta atheromatous, a large patch especially one-half inch from the valves.

Liver enlarged, hard, congested. *Kidneys* small, congested, capsules adherent; relation of cortical to medullary substance normal.

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Microscopical Examination.—The kidneys showed decided interstitial nephritis, with fatty degeneration of the tubular epithelium. The liver was slightly cirrhotic and fatty. The muscular fibres of the heart had undergone slight fatty degeneration.

Aortic-valve disease due to the combined action of strain and rheumatism; excessive dilated hypertrophy. By J. H. MUSSER, M.D.

Neither the habits, the hygienic surroundings, nor the social conditions of Mr. C. K., from whom these specimens were removed, had any relation to the cause of his illness. As a laborer in a rolling-mill his occupation might have had some predisposing influence on the localization of the disease,—he being exposed to extremes of heat and obliged to do heavy lifting. The family history did not disclose hereditary disease. Withal in the past twenty years—at this noting he was aged 47—he had had frequent attacks of inflammatory rheumatism, and in 1875—four years previous to this account—he had an unusually severe attack, after which he recognized his present palpitation and indigestion, characterized by pain and vomiting. These symptoms increased in frequency and severity, and were often attended by œdema of the legs. The last three years he was unable to work. Within the year he lost in flesh and strength, and had several attacks of pulmonary congestion.

On admission to hospital, December, 1879, he was "slightly emaciated; sallow complexion; anæmic appearance; countenance of suffering; dry skin; cold extremities; ankles œdematous; muscular weakness; tremor on exertion; marked prominence of lower part of chest, and bulging of præcordia; sternum pushed forward, lower half especially, giving pouter-pigeon appearance. Impulse marked in normal cardiac area, and extending two inches to the left; epigastric pulsation; pulsation of veins of neck; apex-beat in sixth interspace one inch outside of nipple-line; no hepatic pulsation. A line drawn diagonally from the second right costo-sternal articulation to the fourth rib, one inch from right nipple-line, and then vertically to the hepatic dulness, represented the right border of cardiac dulness. From the top of the third left rib, one inch from the sternum, a uniformly curved line, extending to the apex-beat, showed the left limit. By joining these lines with horizontal ones, the upper and lower borders are defined.

"On auscultation, at the aortic orifice a strong systolic murmur, transmitted to the vessels of the neck, and a rough diastolic murmur, transmitted to the base and along the sternum, are noted. At the xiphoid cartilage and at the apex, systolic murmurs, differing in pitch, are heard, the latter also at the spine of the left scapula. Pulse small, feeble, compressible.

"Cough and muco-purulent expectoration are complained of, and the physical signs of bronchial congestion are observed. The appetite is poor; pyrosis and flatulence distressing; bowels constipated; urine slightly albuminous; no casts."

Subsequent course.—With calomel and soda, and a liquid diet at first, followed by digitalis and quinia, the venous stases had disappeared and the cardiac symptoms ameliorated within a month. After exposure to cold, internal venous congestion and œdema had supervened, and in five days—January 20, 1879—he died of pulmonary congestion.

At the autopsy the lungs, liver, spleen, and kidneys were found characteristic of dilatation of the heart,—congested and with increase of connective tissue in the latter three organs. The heart presented very interesting lesions. It was enormously enlarged, weighing thirty-two ounces. The right heart was dilated; the ventricle-wall averaged one-eighth inch in thickness; the tricuspid orifice was insufficient, and admitted four fingers. The left ventricle-wall averaged one-half inch in thickness; the mitral valves were slightly thickened, and a few opaque patches were seen. The aortic valves presented a remarkable appearance: two of them were fused together, and were rigid, projecting in the lumen of the orifice, the other valve also assisting in narrowing the calibre of the opening by rigidly jutting outward. The lumen was scarcely more than a slit. The coronary arteries were not closed, and were found at the bottom of a pouch with calcareous walls. On one side the deposited calcareous matter of which the valves were composed extended under the endocardium to the base of one of the mitral leaflets. Of course the valves were covered by endothelium.

It is of interest to note that the mitral valves comparatively escaped the inflammatory storms, while the aortic valves were so markedly affected,—contrary to the usual rule. It is suggested that a chronic valvulitis, or at least hyperæmia, might have been started by the strain incident to his occupation, and hence the valves readily invite acute inflammatory processes, the present case being a secondary degenerative result thereof.

REVIEWS AND BOOK NOTICES.

EXPERIMENTAL PHARMACOLOGY. By Prof. L. HERMAN. Translated, with Notes and Additions, by ROBERT MEADE SMITH, M.D. Philadelphia, Henry C. Lea's Son & Co., 1883.

This little volume is a well-written translation of a work in itself excellent, the value of which has been greatly enhanced by the additions of the translator. It is just the kind of book that is needed in the physiolog-

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ical laboratory, containing an admirable description of apparatus and of methods, and devoting much space to the manner of correctly interpreting the results of experiment. Every section exhibits well-selected matter added by Dr. Smith, still further improving and fitting the work for the American student, whose opportunities for practical study are, unfortunately, not as great as those of his foreign cousin. Besides mere additions, Dr. Smith is the author of several entire sections, making the amount of original material contributed by him almost equal in bulk to that of the original volume; and a critical examination convinces us that these extensive additions are in every way justified by their importance.

The subject-matter is presented in a clear and acceptable form, and the student is assisted by abundant illustrations. It is compact and thorough, and, whilst adapted to the tyro, is a sort of *vade-mecum* for the more experienced investigator. In short, it is in every sense a good book. F. D.

BACTERIA AND THE GERM THEORY OF DISEASE. By Dr. H. GRADLE. Chicago, W. T. Keener, 1883.

The most interesting of all problems whose solution is now pressing upon the medical profession is that of the relation of the lower organisms to the diseases of higher animals and man. Although in the practical work of discovery much knowledge of technique, much personal skill, and much patience of brain and body are required, the elements of the problem are of such character that the facts and their relations can be apprehended by any intelligent physician. Indeed, in the present case the general profession may be looked upon as the jury; the investigators as the witnesses; the counsel on either side, and such men as Prof. Gradle, as the judges who sift and sum up the evidence. Keeping this metaphor in view, we should say emphatically that Judge Gradle's charge is a singularly fair and able one. Clear, well written, and thorough, it ought to be widely read and thought over. Of all the general overlookings of the field it seems to us the most thorough and impartial of any which we have seen.

GLEANINGS FROM EXCHANGES.

CARBOLIC ACID IN CLINICAL MEDICINE.—Prof. J. G. Westmoreland, of Atlanta, gives the following practical observations as the result of his experiments with carbolic acid:

"Shortly after the remedy had been brought to notice, I, from some report of its action probably, used it as a general styptic for menorrhagia, in the dose of two drops repeated every two hours. Proving successful for the relief of this hemorrhagic condition, I decided to test it in purpura hæmorrhagica. Accordingly, in a case presented in the Medical College clinic, which had been treated without benefit by the usual means, muriated tincture of iron, etc., I prescribed carbolic acid in the dose of two or three drops every three or four hours, well diluted with water, with complete success in a day or two.

"While the styptic effect may not be universally recognized, no one, as far as I know, objects to its use in this way. It is the local action, as described, which calls forth the opposition. When it is asserted that the undiluted acid may be applied to chancre, chancroid, diphtheria, chronic intra-uterine inflammation, etc., with very little pain, the war begins. Physicians assert, of course without ever having tested it, that destructive action will be had upon the mucous membrane, and therefore cicatricial tissue necessarily follows. Learned gynæcologists, to whose use the remedy seems to me peculiarly adapted, forbid its introduction into the uterus, alleging that stenosis will be the result. Whether this conclusion is reached by experience or reasoning, it is certainly not more reliable than the opinion formed by hundreds of applications of the pure acid made in endometritis, diphtheria, cancerous ulcers, etc., without stenosis or other unfavorable result. When properly applied, so as to come in contact with the diseased part alone or the internal mucous membrane, very slight pain is produced, not more than that from astringent solutions of moderate strength. I have applied it with a camel's-hair pencil to the pseudo-membrane of diphtheria in the mouth of an infant, and by injection to the urethra in gonorrhœa, taking care that the acid does not come in contact with the lips, glans penis, or prepuce. When applied to the uterus or vagina, its contact with the pudendum must be avoided.

"In the treatment of cancer I have used the acid only as an application to the ulcerated surface; but, from the promptness with which progress is arrested and superficial healthy tissue formed, I have hope of success, to some extent at least, in the bold attempt at cure by injection into the indurated tumor.

"In the commencement of what seemed to be malignant (cauliflower) disease of the os uteri, complete and permanent relief has followed the twice-a-week application of pure acid.

"Piles may be permanently cured, in half a week or two weeks, by injecting the tumor with undiluted carbolic acid. The needle of a hypodermic syringe charged with the acid must be plunged into the centre of the tumor and the piston slightly moved forward so as to discharge one to three drops. Let the needle remain for a minute, and then with-

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draw. Each tumor must be thus injected, and, if large, two punctures should be made. The tumor becomes pale, shrivels, and generally becomes dark and putrid in a day or two. No great pain attends the operation. Only a stinging sensation is experienced, which lasts a few moments.

"When several tumors exist, a second operation sometimes becomes necessary, owing to the failure to inject all the prominent points. On the second day the injection may be repeated if all the tumors do not become pale, lessened in size, or dark.

"The benefit derived from carbolic acid is, doubtless, derived from the peculiar action upon the capillaries and the blood itself. When applied to a surface it becomes white and bloodless, and when thrown into a mass of blood it is made more or less coagulable, according to the proportion of the mixture. This driving of the blood, as it were, from the surface accounts for the control of inflammation by its local application, and the coagulating quality renders it useful as a general styptic. Indeed, inflammation, I believe, may be prevented to a large extent, in a part injured, by a proper application in diluted form. And while its good effects in this way are attributed to the destructive action upon bacteria, we think its good effects can be explained without recognizing the existence of these animalcula as factors in the production of inflammation and putrescence."—*Southern Medical Record.*

DEATH FROM CHLOROFORM-ADMINISTRATION.—Dr. Hunter McGuire reports a case of sudden death during chloroform-administration (*Virginia Med. Monthly*). A woman, 35 years old, without signs of organic disease of heart or lungs, applied for treatment for ruptured perineum. About (*sic*) a drachm of chloroform was poured on a napkin, and she breathed it in gradually and quietly. Dr. McGuire describes the result very graphically as follows:

"After she had breathed the anæsthetic for about two minutes and was still conscious, the pupils of both eyes slowly dilated to two or three times their natural size. When I saw this I spoke to her, and she answered me intelligently. While she was speaking, the pulse in the arm upon which I had my finger stopped suddenly. It did not flutter and gradually fail, but abruptly ceased. The last stroke was as full and distinct as those which preceded it. A blow upon the heart would not have stopped it more abruptly, so sudden and complete was the *cardiac paralysis*, and this took place before she was under the influence of the chloroform, and while she was yet conscious. When the heart stopped, the face became pallid, some convulsive movements of the muscles of the face and neck occurred, spasmodic, not tetanic in character; dilatation of the pupils slightly increased, and respiration continued for some seconds after the pulse ceased beating at the wrist. At least twenty-five or thirty respirations occurred after the cardiac paralysis, but the breathing was irregular, convulsive, and imperfect. Fifteen or twenty seconds intervened between the first appearance of dilatation of the pupils and arrest of the heart's action.

"Nitrite of amyl, galvanism (both agents were close at hand), inversion of the body, and artificial respiration, kept up for an hour, were employed, but were of no avail."

CEREBRAL VACUOLATION.—Drs. White and Savage read a paper upon this peculiar and interesting pathological condition, which especially exists among the chronic insane, and especially in general paralysis. They recognized especially nine causes for holes in the brain.—1. Small processes of sclerosed meninges, in cases of general paralysis, dipped into and excavated minute portions of cerebral tissue. 2. In the same disease the sclerosed neuroglia, by its contraction, might give rise to small cavities. 3. There might be multiple hydatids in the brain. These three conditions were very rare, the authors having no knowledge of the second, whilst the third was almost confined to animals suffering from staggers. Several references to continental authors were given, whilst the relation of the muslin-appearance to the second of the above was pointed out. 4. The fourth cause was the dilatation of cerebral vessels giving rise to the *état criblé*. It was particularly emphasized that this was, in the majority of cases, of no pathological significance. 5. Shrinking of the cerebral convolutions in some cases gave rise to holes in the subjacent cerebral substance; a very good example of this condition was exhibited. 6. Miliary aneurisms, as Charcot had pointed out, might give rise to holes in the brain-substance; some very marked specimens showing this were exhibited. 7. In the condition known in Germany as *die Porencephalie*, a large gap existed in the brain-substance; this might communicate either with the exterior or the interior of the brain, or both. 8. The Gruyère cheese condition. This, it was pointed out, was quite different from the *état criblé*, for it was due to a dilatation of the perivascular lymphatic space of His. Of the causes of this dilatation nothing was known; probably they were local, so the dilatation was saccular. The authors showed an example of this condition, in which the whole of the brain, except the lower part of the medulla, was riddled with cavities exactly like those found in cheese, and microscopic specimens exhibited showed that these holes were produced by this perivascular dilatation. The shape and direction of the cavities also corresponded with that of the vessels. Very few examples of this condition had been carefully described; in England

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only one, by Lockhart Clarke, who referred it to the same cause. 9. The authors showed specimens from two remarkable cases in which the kidneys, lungs, liver, heart, and brain all contained holes: in the kidney these cysts were due to the dilatation of either the tubules or Malpighian capsules; in the liver they were due to the vacuolation of the hepatic cells; in the lungs and brain it was impossible to come to any definite conclusion as to their origin, but in both these viscera the cavities contained a peculiar material, staining deeply with logwood; both the subjects were lunatics. Cases in which there were only a few holes, such as patches of softening hemorrhage, were not considered to come within the scope of the paper.—Dr. Savage said that, in the cases of the two lunatics last referred to, the changes were certainly not due to changes produced by preservative fluids after death, as the vacuolation was noticed at the necropsy. Both the patients were general paralytics, but in one the disease was chronic (three or four years), in the other acute (three or four months). He was convinced that the vacuolation occurred under various conditions. This question of multiple cystic disease deserved consideration and discussion.—*British Medical Journal.*

CURE OF HYDATID CYSTS BY CAPILLARY PUNCTURE.—Dr. Alessandro Borgherini reports *in extenso* the histories of four cases of echinococcus cysts treated by capillary puncture and withdrawal of a small quantity of fluid. Of the four cases three were cured, but in the other a second puncture with complete evacuation of the cyst was necessary. The punctures were made with the needle of a hypodermic syringe, and the amount of fluid withdrawn was from one-half to two drachms. A slight elevation of temperature followed the operation in every instance, but in one case only did the fever continue for any length of time or rise to any considerable height. Improvement did not follow until from eight to fifteen days after the punctures were made. The author thinks that possibly the cure is brought about by the altered tension caused by the abstraction of a small amount of fluid and the consequent disturbance of osmosis, a process by which the parasite obtains nourishment. Or possibly the slight puncture acts as a traumatic injury impairing the vitality of the parasite.—*Gazzetta Medica Italiana; The Practitioner.*

ART VERSUS NATURE.—Discussing the use and advantages of antiseptic injections after delivery, and defending himself against the opprobrium of meddlesome midwifery, Dr. Douglas Martin (*Louisville Medical News*) says, "This doctrine of non-interference with physiological processes is so often urged as a plea for complacent inaction where a patient's health, perhaps life, is at stake, that I think a fuller answer ought to be given. We do not leave nature alone in a case of club-foot, or of squint, or of teeth out of line. The horticulturist does not leave her alone when from a crab-apple a pippin is developed. She is not left alone when from the coarse, rough, wild dog a setter or St. Bernard is produced. Indeed, throughout the whole realm of nature with which man has immediately to do, the highest forms of beauty and of usefulness are attainable only by means of the appliances of art. Is the fact, then, that childbirth is a physiological process a reason why art should not be laid under contribution to the fullest extent possible for the alleviation of its pangs and the lessening of its perils?"

MISCELLANY.

ASYLUM-SUPERINTENDENTS IN SESSION.—The thirty-seventh annual meeting of the Association of Medical Superintendents of American Institutions for the Insane was opened at Newport, Rhode Island, June 26. Dr. J. H. Callender, of Nashville, Tennessee, presided, and thirteen States, the District of Columbia, and the Provinces of Quebec and New Brunswick were represented. Dr. H. R. Storer, President of the Newport Medical Society, Dr. Foster Pratt, of Kalamazoo, Michigan, and Dr. Darius, of the Willard Insane Institution at Ovid, New York, were presented to the Association. The members of the medical profession of Newport and the vicinity, and the surgeons of the navy in that port, were, on motion, invited to be present at the sessions of the Association. The following officers were elected: *President*, Dr. John P. Gray, of Utica, New York; *Vice-President*, Dr. Pliny Earle, of Northampton, Massachusetts.

TRANSPLANTATION OF MUSCLE IN MAN.—Helferich (*Archiv f. Klin. Chirurgie*, B. xxviii. p. 562) reports a case in which, as a result of the removal of fibro-sarcoma from the arm of a woman aged 36, the whole upper half of the biceps, with the exception of a thin strand at its outer part, was extirpated. Into the cavity which was left he promptly introduced a large fragment of the biceps from the leg of a dog. The cut surfaces were carefully brought together with sutures, as little injury as possible being done to the parts. The transplanted muscle was much more voluminous than the original portion, and was long after the operation distinctly perceptible to the touch. Electric experiments instituted about three months after the operation showed that the biceps reacted perfectly naturally to both kinds of current. The high point of stimulation situated at the place of section of the musculo-cutaneous nerve was, however, absent. The movements at the elbow-joint were almost normal.—*Lancet.*

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JUNIATA VALLEY MEDICAL SOCIETY.—At the meeting of the Juniata Valley Medical Society, held this year at Cresson Springs, a large number of Philadelphia physicians were present as the guests of the Society, a special excursion having been tendered by the Pennsylvania Railroad Company. The trip was greatly enjoyed, as arrangements had been carefully made by the company for the comfort and entertainment of the guests. A very satisfactory session of the Society was held, at which the usual business was transacted. Dr. W. R. Findlay, of Altoona, was elected *President;* Drs. John Lowman, of Johnstown, and I. Thompson, of Blair county, *Vice-Presidents;* Dr. H. Jacob, of Altoona, *Secretary;* and Dr. S. M. Ross, of Altoona, *Treasurer.*

EFFECTS OF PLANT-LIFE ON MAN.—At Joinville-le-Pont, a suburb of Paris, recently, a young married couple, horticulturists by profession, were found dead in their greenhouse, where they had spent the night. The medical report stated that they were asphyxiated by the emanations from the flowers and plants.—*Lancet.*

PROFESSORS FOR JOHNS HOPKINS.—In view of the needs of the medical school and hospital shortly to be opened, the trustees have commenced the organization of a faculty, and have selected Prof. Remsen for the chair of Chemistry, Prof. Martin, of Biology, and Dr. Billings, of Hygiene. It is not known yet whether these gentlemen have positively accepted.

DR. PARISH'S PORRO-CÆSAREAN OPERATION.—The operation at the Philadelphia Hospital, of removal of the uterus and appendages at the termination of pregnancy, by Dr. Parish, terminated fatally to the mother on the third day.

DR. ROBERT DRUITT, author of "Druitt's Surgery," so well known to American students, died in Kensington, England, on the 15th of May, at the age of sixty-nine.

NOTES AND QUERIES.

A FRAUDULENT PUBLICATION.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

SIR,—I have recently received several letters from physicians inquiring what is my relation to a volume entitled *An Epitome of Medicine, Surgery, and Obstetrics, Including Nervous Diseases and the Diseases of Women and Children*, by Alfred Stillé, M.D., etc., D. Hayes Agnew, M.D., etc., R. A. F. Penrose, M.D., etc. Philadelphia: Samuel M. Miller, M.D., Publisher, 1883.

Will you permit me to state that my relation to the volume is that of a professor whose legal rights have been infringed, and whose professional rights have been treated with discourtesy? that the work both misrepresents and perverts my teaching, and has been issued without my knowledge, consent, or approval, and continues to be circulated, notwithstanding my exposure of its real character before my medical class at the close of the last session? I beg to warn all medical men that the "Epitome" is not in any sense "by" me, as its title-page declares it to be, and that I denounce it as being a false and fraudulent publication.

ALFRED STILLÉ, M.D.

July 20, 1883.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

SIR,—I am receiving letters from various sections of the country, asking for information in regard to my connection with a little volume published by a Dr. Samuel Miller, and entitled *An Epitome of Medicine, Surgery, and Obstetrics*, by Drs. Stillé, Agnew, and Penrose.

I have no desire to increase my correspondence, already too onerous, and therefore deem it best to avail myself of the columns of your widely-circulated journal to inform my professional brethren that I disown any relation whatever with this miserable piece of literary larceny, published entirely without my knowledge, and only remarkable for inaccuracy, stupidity, and audacity on the part of its author.

Yours, truly,

D. HAYES AGNEW, M.D.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY FROM JULY 14 TO JULY 21, 1883.

BAILY, E. I., COLONEL AND SURGEON.—In addition to his present duties, to take charge of the office of Medical Director Military Division of the Pacific during the absence of the Medical Director. Paragraph 2, S. O. 64, Military Division of the Pacific, June 30, 1883.

SUTHERLAND, C., COLONEL AND SURGEON, MEDICAL DIRECTOR MILITARY DIVISION OF THE PACIFIC.—Granted leave of absence for one month, with permission to apply to the Adjutant-General of the Army for extension of two months. Paragraph 1, S. O. 64, Military Division of the Pacific, June 30, 1883.

CAMPBELL, JOHN, LIEUTENANT-COLONEL AND SURGEON, MEDICAL DIRECTOR DEPARTMENT OF THE SOUTH.—Leave of absence on surgeon's certificate of disability granted by S. O. 50, Department of the South, May 21, 1883, extended one month on surgeon's certificate of disability, with permission to leave the Department of the South. Paragraph 7, S. O. 156, A. G. O., July 9, 1883.

MAGRUDER, D. L., LIEUTENANT-COLONEL AND SURGEON, MEDICAL DIRECTOR HEADQUARTERS DEPARTMENT OF THE MISSOURI.—Granted leave of absence for one month, with permission to apply for an extension of one month. S. O. 145, Department of the Missouri, July 12, 1883.

ELBREY, FREDERICK W., CAPTAIN AND ASSISTANT-SURGEON.—The leave of absence granted on surgeon's certificate of disability by S. O. 26, A. G. O., January 31, 1883, further extended six months on surgeon's certificate of disability. S. O. 162, A. G. O., July 16, 1883.

POWELL, JUNIUS L., CAPTAIN AND ASSISTANT-SURGEON.—Assigned to duty at Fort Columbus, N. Y. H. S. O. 130, Department of the East, July 18, 1883.

RICHARD, CHARLES, FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Assigned to duty at Fort Adams, Newport, Rhode Island: S. O. 130, Department of the East, July 18, 1883.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY FROM JULY 7 TO JULY 21, 1883.

Medical Inspector A. HUDSON, Assistant to Bureau of Medicine and Surgery, and P. A. Surgeons S. H. GRIFFITH and E. H. GREEN, granted leave of absence for one month.

Dr. HORACE BROWN SCOTT appointed an assistant-surgeon.

Assistant-Surgeons CHARLES W. RUSH, OLIVER DIEHL, J. H. BRYAN, and J. D. GATEWOOD promoted to P. A. Surgeons.

Surgeon C. H. WHITE and P. A. Surgeon A. C. HEFFINGER detached from the "Lackawanna;" the former placed on waiting-orders, and the latter granted three months' leave.

Surgeon T. WOOLVERTON detached from the Naval Hospital, Philadelphia, on the 31st of July, and granted leave of absence for one year, with permission to leave the United States.

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PHILADELPHIA, AUGUST 11, 1883.

ORIGINAL LECTURES.

CLINICAL LECTURE

ON DIABETES MELLITUS.

Delivered at the Pennsylvania Hospital, January 10, 1883,

BY JAMES H. HUTCHINSON, M.D.,

One of the Attending Physicians to the Pennsylvania Hospital, Physician to the Children's Hospital, Philadelphia, etc.

Reported by WILLIAM H. MORRISON, M.D.

GENTLEMEN,—In fulfilment of the promise which I made at the last lecture, I re-introduce the case of diabetes mellitus to which at that time I briefly alluded. In order that the case may be fixed on your minds, I shall again give you its history.

This woman is 50 years of age, a child's nurse by occupation; she was always remarkably healthy until last summer. She then noticed that she passed more urine and was more thirsty than was natural with her. This condition has continued until the present time. Since last summer she has lost much flesh and strength, although the appetite has continued as good as ever. Her family history is good.

Two weeks ago she caught cold, and has been coughing considerably ever since. On admission, the patient was pale, thin, and weak; the tongue was dry, red at the sides and tip, the middle being covered with a dry white fur. The mouth was dry and the gums red; the heart and lungs normal; the urine has a specific gravity of 1040, and contains a large amount of sugar, the fermentation process showing thirty-nine grains to the ounce.

She was at first placed on a placebo of aqua camphoræ in one-ounce doses, twice daily, in order that the exact quantity of urine passed might be determined. On December 29, the day after admission, she passed eighty ounces of urine. On January 1 the camphor-water was stopped, and she was ordered one grain of opium twice a day, to be increased by one grain every third day. On January 5 she was placed on a skim-milk diet. That day she passed ninety-two ounces of urine having a specific gravity of 1042. On the 6th the amount was eighty-eight ounces, specific gravity 1044; on the 7th, eighty ounces, specific gravity 1044; the 8th, sixty-six ounces, specific gravity 1035; the 9th, sixty-eight ounces, specific gravity 1035; the 10th, eighty ounces, specific gravity 1030. Up to to-day there has been progressive improvement, not merely in the diminution of the amount of urine, but also in the lowering of the specific gravity. Although during the twenty-four hours ending this morning she passed eighty ounces, the specific gravity was only 1030.

At the last lecture I showed you the distinctive features of diabetic urine. I showed you that it has a high specific gravity. I called attention to the various tests for the presence of sugar. One was Moore's test, which consists in boiling a certain amount of the urine with an equal amount of liquor potassæ, when, if the urine contains diabetic sugar, it will become dark in color, and if the condition is at all aggravated it will assume a port-wine color. I also showed the different copper tests dependent upon the deoxidation of the oxide of copper and the production of the suboxide, which is thrown down as a brick-red deposit. It was also pointed out that when a certain portion of yeast was added to diabetic urine, fermentation was set up, the effect being to form carbonic acid and alcohol and to lower the specific gravity of the liquid. There is another test, to which I did not allude,—*i.e.*, the use of subnitrate of bismuth with caustic potash. If sugar is present, a black deposit of the oxide of bismuth is thrown down. This test is not so frequently used as the others mentioned. In addition to these tests, diabetic urine has a sweetish odor, which has been compared to that of hay, roses, or violets. The taste is also said to be sweetish. The urine is also increased in amount. Instead of being fifty ounces, as in health, it is much more. In this case it has been as high as ninety-two ounces in twenty-four hours. The specific gravity, instead of being from 1020 to 1024, is much higher. Here it has been up to 1044. We find that this urine responds to all the tests and has all the characteristics of diabetic urine; and there is therefore no doubt that this woman is suffering from diabetes mellitus.

There are several diseases which, in the large amount of urine passed, resemble

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diabetes mellitus. There is one in particular,—that is, diabetes insipidus. In this disease, while the amount of urine excreted is excessive, its specific gravity is low; instead of being 1040, 1050, or 1070, it is but little more than ordinary water, being only 1004 or 1005. The urine, in such cases, does not respond to the tests for sugar. There is therefore little difficulty in discriminating the two. There are other conditions in which the amount of urine is greatly increased, as in certain forms of Bright's disease. In the cirrhotic kidney there is the excretion of an excessive quantity of urine. It may be as much as is passed by this woman. The specific gravity is, however, low, and when tested for sugar there is none found. On the other hand, albumen is, as a rule, present, but this is not always true, for in certain cases of cirrhosis of the kidney it may not be found. In albuminoid disease of the kidney the urine is much increased, but it is of low specific gravity and contains albumen. In this form of disease albumen is, as a rule, readily found. There is in albuminoid degeneration of the kidney, more frequently than in cirrhosis, the presence of dropsy, notwithstanding the large amount of urine passed. On the other hand, dropsy is not a frequent symptom of diabetes mellitus, although it occasionally occurs in the last stages. There may, of course, be a temporary polyuria from the ingestion of large amounts of water, or certain diuretics. Beer and wine will also increase the amount of urine. If this condition does not last more than a day or two, it does not constitute a symptom of disease. On the other hand, it is a sign of health, for it shows that the kidney is capable of throwing off the increased amount of water ingested.

Let me now review this case. The first symptom to which she called attention in this connection was that she passed more water and was more thirsty than natural. Upon questioning her more carefully, however, I found that she had suffered before, or at all events at the same time, from a symptom which is not uncommon in these cases, and one which should always excite suspicion when it occurs in women rather advanced in life. This is some itchiness of the vulva. She also states that she lost strength and flesh, although her appetite continued good. We can readily understand this. Every grain of sugar which passes off in the urine represents a certain amount of nourishment which has failed to be assimilated.

We find, on a further examination of the history, that a short time ago she had an attack of bronchitis, for which she was admitted. Until the urine was examined, she was not known to be the subject of diabetes. The bronchitis was probably to some extent due to the fact that her weak condition rendered her more liable than she otherwise would have been to take cold.

Looking at the patient, you see that she is emaciated, although not extremely so. Her skin is usually dry and harsh, but at present, as a result of the excitement of being brought before you, she is perspiring, and the skin is moist. The tongue is slightly red, and has the coating of which the notes speak.

The principal symptom of diabetes is the presence of sugar in the urine. The presence of the sugar is rather difficult to explain. Bernard, one of the most distinguished physiologists of France, supposes that sugar is formed normally in the liver, and, in a series of experiments which he conducted, found that sugar is almost constantly present in the ascending cava and the right side of the heart, while it disappears to a great extent in the arteries. This opinion has been adopted by the great majority of observers. There are, however, a few who doubt that the formation of sugar is a normal function of the liver. They say that there is formed in the liver a substance readily converted into sugar, but that in health this change does not take place. When this substance is converted into sugar, the latter appears in the urine. In order, therefore, for diabetes to exist, there must be either an excessive production of sugar or of some substance readily converted into sugar, or else there must be a diminished combustion of these materials. There may be too much formed or too little used. In either case the sugar would appear in the urine. Diabetes is therefore not a disease of the kidney; the kidney simply excretes the sugar. In most cases of diabetes the kidneys after death are found to be healthy. In certain cases they have been found enlarged and flabby, simply from over-exertion of their normal function. Diabetes may coexist with albuminuria and kidney-disease.

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In regard to the liver there is no doubt that sugar, or a substance convertible into sugar, is formed in the liver; but this does not prove that diabetes is necessarily a disease of the liver.

Bernard has gone further: he has irritated certain portions of the nervous system, and caused the appearance of sugar in the urine. If a spot in the floor of the fourth ventricle is irritated, an increased amount of urine is formed. If the floor of the ventricle is irritated at a little different position, near the end of the calamus scriptorius, sugar is formed. If both points are irritated at the same time, there are both sugar and increased amount of fluid. The disease would therefore seem to be dependent upon some irritation of the nervous system. We have further evidence of this in the fact that diabetes has not infrequently followed falls or blows upon the back of the neck, which might produce irritation of this portion of the nervous system.

Dickinson has shown that this part of the nervous system undergoes alterations in this disease. He has found by a series of careful observations on the medulla that in diabetes the vascular spaces are enlarged. It is, therefore, probable that the disease is one of the nervous system, and that the liver is affected only through the nervous system.

As I have stated, sugar appears to be a normal constituent of the blood of the ascending cava and of the right side of the heart. There are certain observers who claim that the presence of sugar in the urine is normal. They say that delicate testing will always reveal it. If it exists at all, the amount is so small and the tests required are so delicate that when the presence of sugar is revealed by the ordinary tests, diabetes may be assumed to be present.

There are various forms of diabetes. Its severity is found to vary according to the age of the patient. In the young it is a very severe disease. In the old it is by no means so severe. I have had under my observation cases of diabetes which have lasted for ten years. These occurred in people advanced in life. Three or four years ago I was consulted by a physician in regard to his mother, who had exhibited marked evidences of diabetes. Under proper treatment the amount of sugar diminished, and I believe has at times disappeared. She lost very little flesh and strength, and at no time was her condition alarming. After a time the disease again increased, but it has since again diminished. A few years ago I saw a lady who had diabetes for ten years, but who had in spite of it maintained a considerable degree of flesh.

This patient is more emaciated than is usual. As I have already said, the presence of a certain amount of sugar in the urine of a person advanced in life is by no means of as grave import as when it occurs in a younger individual. In this case the amount of sugar and of urine is not excessive. The amount of water passed may be as high as fifty pints in the twenty-four hours. In children and young adults the disease usually runs a very rapid and fatal course. In very few of these cases does decided improvement ever take place. I cannot say that I have ever seen permanent improvement secured in a young person; but in the old, improvement often follows appropriate treatment. In the young the disease not rarely runs its course within six months of its discovery.

It is of great importance to know how to treat these cases. It has been found that the amount of sugar passed is to a certain extent under the control of the patient and his physician. In certain instances the sugar will entirely disappear from the urine if the patient is restricted to a certain diet. It has been found by experiment that fatty articles and those containing starch or sugar will greatly increase the amount of sugar passed. In some instances the elimination of these articles from the diet will cause an entire disappearance of the sugar. In other cases it simply lessens the amount of sugar. This is, however, a gain, for it thus prevents the loss of flesh and strength consequent upon the passage of sugar.

In all cases where it can be borne, the patient should be placed upon a diet from which the fats, starches, and sugars—in other words, the hydro-carbons—have been removed. It is by no means easy to do this. It would be rather easier to live upon a diet of vegetables and articles containing starch and sugar than upon a diet into which these substances do not enter. Only a few vegetables can be allowed, as spinach, cabbage, and the green part of celery. Bread made from ordinary flour cannot be allowed, but the bread should be made

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from bran or from almond flour. The difficulty with this treatment is that the patient soon tires of it. There can be but little variety in it.

It has been found that patients may live for a long time on milk, and that under its use the sugar frequently disappears from the urine. Cream, of course, belongs to the hydro-carbonaceous substances. Skim-milk is, therefore, better than new milk. This treatment was introduced, or at least strongly recommended, by Dr. Donkin, of England. I have used it in a number of instances, and always with a good result. A physician whom I know placed his father, who is a sufferer from this disease, upon a skim-milk diet, causing an entire disappearance of the sugar.

In regard to medicinal treatment, this is not satisfactory. There is a long list of remedies which have been recommended in the treatment of this disease, but the very length of the list shows their inefficiency.

When I was a resident in this institution, under Dr. George B. Wood, yeast was given, and with some success. The theory on which this was given was that by fermentation the sugar was converted into alcohol and carbonic acid. This did not prevent the formation of sugar. Rennet has been used in the same way, and with the same object.

Alkalies, as bicarbonate of potassium, have been employed, and have seemed to lessen the quantity of sugar passed. Certain waters containing the carbonates, as Carlsbad and Vichy, have been used with some success in lessening the amount of sugar, especially in elderly people.

Opium seems to be the remedy which goes nearer to the root of the disease than any other. This acts directly upon the nervous system, and it has the power of diminishing the quantity of urine. I give it according to the recommendation of Dr. Pavy, in doses of one grain twice a day, to be increased by one grain every third day. This has been found to be of service in all cases. Dr. Pavy has also recommended codeia when for any reason opium cannot be given. I have used it under such circumstances with success. The objection to the use of opium and skim-milk is that they are constipating.

The use of lactic acid has been advocated by Dr. Cantani, an Italian physician, and has been of service in some cases. I believe that all treatment is inefficacious if the diet is neglected. It is a singular fact in regard to diabetes, that if a patient transgresses the rules in reference to the diet, the amount of sugar which appears in the urine is much greater than the amount of sugar contained in the substance taken; for instance, a pear or a peach will increase greatly the amount of sugar. It is, therefore, necessary not only to restrict the diet, but to restrict it rigidly.

Before leaving the subject, there are certain points upon which it would perhaps be well to touch.

In regard to the method of estimating the amount of sugar present, there are several methods by which this may be done. The specific gravity will give a certain amount of information. If there is a large amount of water, and the specific gravity is high, we of course know that the patient is losing a large amount of sugar, but it does not tell us the exact amount that is being passed. This can be readily obtained by fermentation. The process is as follows. Take two conical glasses containing urine, put into one a small quantity of yeast, and set them both aside for twenty-four hours. At the end of this time the difference in specific gravity is noted, each degree lost being equivalent to one grain of sugar for every ounce of urine passed. This was done in the present case. At the end of twenty-four hours the specific gravity of the urine to which the yeast had been added was 1005, while that of the urine contained in the other glass was 1044,—the difference being 39 degrees. There was, therefore, in each ounce of this urine thirty-nine grains of sugar. By multiplying the number of ounces passed during the day by this number the daily excretion of sugar would be obtained.

The amount of sugar may also be determined by Fehling's test, by adding the solution until the blue color ceases to be altered. Each minim of the test-solution corresponds to one grain of sugar.

If the carbonic acid developed by fermentation is collected, it will also enable us to determine the amount of sugar, as each cubic inch of carbonic acid gas equals one grain of sugar. This requires, however, a complicated apparatus; while, on the other hand, the method by fermentation requires only two conical glasses, a urinometer, and a little yeast.

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ORIGINAL COMMUNICATIONS.

PROFESSOR BILLROTH'S METHODS OF ANTISEPTIC SURGERY.

BY W. W. JAGGARD, M.D.

ANTISEPTIC surgical methods, as practised by Prof. Billroth, differ in many important particulars from those of English, German, and French surgeons. While the general principle of antiseptic procedure remains identical with that of Lister, several radical deviations from his methods have been made.

An American physician, upon visiting Billroth's operating-room, is at once struck by the entire absence of the spray and the substitution of carbolic acid by iodoform. These two changes exercise a measurable influence in simplifying antiseptic surgical methods.

Mosetig von Moorhof deserves the credit of introducing the iodoform dressing into Billroth's clinic, although it was used extensively as a surgical dressing as early as 1828. Miculicz, emeritus assistant to Billroth, contributed to the renown of the drug by his thorough and practical experiments, whose results were published over three years ago. When first introduced, the drug was used in substance, in large quantities, and toxic effects were soon noticed. As employed at present, in the form of gauze, the danger of toxæmia has been reduced to a minimum.

O. Weber and Billroth were the first to demonstrate that the phlegmonous and febrile symptoms after all forms of injury are due to the absorption of substances formed by chemical changes taking place in the inflamed tissues. From this important discovery resulted Billroth's open treatment of wounds. This method secured the easiest possible escape of all wound-secretions, and its results, in comparison with earlier methods of treatment, were very favorable.

Lister, following the teaching of Schwann and Pasteur, who taught that the offensive discharges of wounds were due to the presence of certain minute vegetable organisms (termed by Billroth *coccobacteria septica*), sought to prevent their contact with wounded surfaces.

The Germans ascribe to Lister merely the popularizing of a scientific fact, while they exaggerate the importance of the discoveries of O. Weber and Billroth. Upon the other hand, too many English surgeons are ignorant of the services of the latter investigators.

O. Weber and Billroth taught the doctrine that wound-fever and septic fever were different degrees of the same process, to which, in some cases, venous thrombosis and infectious embolism—multiple pyohæmia—could be added. This doctrine presents a marked contrast to the older teaching that wound-fever was due to irritation of the nerves, while pyohæmia was a miasmatic contagious disease.

I.—PREPARATIONS FOR THE OPERATION.

The ventilation of Billroth's operating-room is a matter of great importance, and is usually very thoroughly effected. When the ventilation is for any reason defective, the room is sprayed with five per cent. solution of carbolic acid for one or two hours immediately before commencing operative work. This casual preliminary one hour's work is the exclusive function of the spray, at time of writing, in Vienna. Every article of furniture is thoroughly washed and cleaned; the asphalt floor, which inclines upon all sides to a hole in its centre for the escape of water, is thoroughly scrubbed under running water before and after operations.

There are held in readiness before each operation towels, napkins, linen compresses, and large linen sheets, soap and brushes, with a razor; also several wash-basins, filled with a two-and-a-half-per-cent. solution of carbolic acid, for cleansing the hands during the operation.

Five other basins are arranged upon a table: the first containing linen compresses; the second, drainage-tubes and patent needles; the third, bits of Bruns's cotton; the fourth, a special sponge for cleansing the field of operation; the fifth, the sponges to be used during the operation.

Two irrigators, which are filled with two-and-a-half-per-cent. solution of carbolic acid immediately before the operation. These irrigators are suspended from the walls, and their contents are conveyed by rubber tubes to the operating-table. A glass vessel containing antiseptic silk. Two well-cleaned, deep dishes, one larger, one smaller. The larger dish is placed upon a small table furnished with rollers,

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and is destined to receive all instruments when not in use. The smaller dish holds thread and ligature-materials. Both dishes are filled with two-and-a-half-per-cent. solution of carbolic acid.

Bandages, cotton, iodoform, and carbolized gauze and mackintosh are contained in clean, air-tight receivers.

II.—CLEANSING OF THE HANDS OF THE OPERATOR AND OF THE ASSISTANTS.

The hands and forearms of the operator, and of each assistant who comes in contact either with the wound or an instrument employed in the operation, are washed with soap, and the finger-nails conscientiously brushed. The hands are then dipped in a two-and-a-half-per-cent. solution of carbolic acid, and are not dried. If operator or assistant has been exposed to a special source of infection, such as a vaginal or rectal examination, some substance acting mechanically, such as river-sand or almond flour, is used to remove any secretion still adherent. After this, the hands are dipped into a ten-per-cent. solution of permanganate of potassium. The red stain of this latter agent may be removed by submerging the hands immediately in a ten-per-cent. solution of commercial hydrochloric acid, or a saturated solution of oxalic acid.

III.—PREPARATION OF THE PATIENT AND FIELD OF OPERATION.

Every patient receives at least one warm bath before being operated upon. Immediately before the operation, the field of operation is shaved, and thoroughly scrubbed with brush and soap. All foreign bodies adhering to the skin-surface, such as tar or paint, are removed by oil, turpentine, or sulphuric ether. After this thorough cleansing, the field of operation is irrigated with a two-and-a-half-per-cent. solution of carbolic acid.

To protect the patient from the absorption of carbolic acid, the dependent portions of the body are smeared with vaseline.

The covering of the operating-table is of black caoutchouc.

Around the field of operation are placed black caoutchouc cloths, and upon this basis are arranged linen compresses saturated with a two-and-a-half-per-cent. solution of carbolic acid. Upon these compresses rest instruments during the pauses of the operation.

IV.—PREPARATION OF INSTRUMENTS.

Cutting instruments are frequently polished and sharpened, and are only placed in two-and-a-half-per-cent. solution of carbolic acid immediately before the operation. Blunt, nickeled instruments are not affected by the acid, and may be placed at once in their receivers. Knives soiled with blood or pus are placed first in water, washed with soap and brush, dried with a clean cloth, and rubbed with a piece of soft leather until they are perfectly bright and clean. After use by infectious wounds, blunt instruments are heated to a red heat and then fresh nickeled; cutting instruments are left lying twelve hours in a five-per-cent. solution of carbolic acid, then polished and sharpened.

The ligature and suture-silk, which is contained in closed glass vessels in five-per-cent. carbolic-acid solution, and the wire and lead plates, which are preserved in ten-per-cent. carbolized glycerin, are placed before use in a two-and-a-half-per-cent. solution of carbolic acid.

Salicylic acid may substitute carbolic acid, if the latter is unpleasant to the operator; but its action upon steel is greater.

V.—PROCEDURE DURING THE OPERATION.

The operator and assistant are clad in long, freshly-washed linen coats.

The field of operation is frequently irrigated with a two-and-a-half-per-cent. solution of carbolic acid: if the field of operation is in the vagina or rectum, the mucous membrane is continually irrigated with one-per-cent. carbolic-acid solution.

The sponges are carefully disinfected before use, and are burnt after the operation.

Arrest of hemorrhage is effected with a great degree of nicety; each bleeding point is secured by a silk ligature or by torsion. All operations upon the extremities are performed with the aid of Esmarch's rubber bandage and tube. In operations where other methods of arresting hemorrhage are not available, the wound is irrigated with ice-water, filled with iodoform gauze, and compressed from without. When this procedure is insufficient, the wound may be plugged with Penghawar Djambi—the hair of an East Indian tree-fern—permeated with iodo-

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form. Monsel's solution is banished from the clinic.

After the completion of an operation, the wound is irrigated with two-and-a-half-per-cent. carbolic-acid solution, and dried with sponges to remove any blood-coagula or foreign matter.

A foreign surgeon observes with pleasure the extreme care bestowed upon the drainage of wounds in Billroth's clinic. It ought to be remembered in this connection that Billroth has employed drainage-tubes since 1861. Superficial wounds, whose surfaces can be cleansed and approximated by compresses, receive no drainage-tubes, but deeper ones are carefully drained, so as to avoid any accumulation of the first and most dangerous secretion. To this end, the drainage-tubes are inserted into the most dependent portions of the wound, as determined by the patient's posture in bed. To effect this, it is frequently found necessary to make openings by means of the knife or drainage-trocar. After each tube has been demonstrated to be performing its function, by irrigating the wound and observing the promptness with which the fluid is removed, the surfaces of the wound are approximated by two sets of sutures,—one deep, one superficial. The deep sutures are of strong silver wire, and are retained in their places by shot compressed against small lead plates; the superficial sutures are of carbolized silk, No. 4 or No. 5.

VI.—THE DRESSING OF THE WOUND.

Billroth's dressing of the wound differs from Lister's chiefly in the substitution of carbolized gauze by iodoform, in the form of powder or of gauze.

Outside of the operating-room, iodoform is employed:

(*a*) As a powder, sprinkled over wounds, as upon the perineum, by means of Dr. Wölfler's iodoform-duster.

(*b*) As gauze, which may be either (*a'*) dry, "hydrophile," or (*b'*) adhesive. For the preparation of hydrophile iodoform gauze (*a'*), a coarse, unbleached muslin, which has been deprived of its fatty particles, is placed in a basin, washed with carbolic acid, and is sprinkled with iodoform in form of powder until the cloth assumes a yellow color. According to the thoroughness of this operation, the gauze contains from ten to twenty per cent. of iodoform. Fifty grammes of iodoform are sufficient to impregnate six and a half metres of muslin. Hydrophile gauze costs in Vienna about eight cents per metre.

For the preparation of the adhesive iodoform gauze (*b'*), the muslin, deprived of its fatty particles, is saturated with a mixture of alcoholic solution of colophonium and glycerin. The gauze is dried carefully and impregnated with iodoform in the same manner as the hydrophile. For six metres of gauze it requires two hundred and thirty grammes of iodoform and one hundred grammes of colophonium, which is dissolved in twelve hundred grammes of ninety-five per cent. alcohol, to which fifty grammes of glycerin are added. This adhesive iodoform gauze costs in Vienna about thirty-two cents per metre.

The chief function of adhesive iodoform gauze is the arrest of hemorrhage in cases of parenchymatous hemorrhage.

(*c*) As iodoform-glycerin. This preparation consists of ten to twenty parts of iodoform to one hundred parts of glycerin, and is employed for injection into cold abscesses after the evacuation of pus by puncture or incision.

(*d*) As iodoform-collodium. This preparation is composed of iodoform one part to collodium ten parts, and is used in enormous quantities in the ambulatorium. It is a sovereign remedy for cuts and slight bruises. An ethereal solution of iodoform (one part iodoform, seven parts ether) forms a very convenient covering for syphilitic scleroses, and for mucous patches in the buccal cavity.

(*e*) As iodoform-bacilli. The formula for this preparation, as it is found in the pharmacy of the General Hospital, is

Iodoform. pulv., 20.0;
Gummi arabici,
Glycerini,
Amyli, } āā 2;
Fiant bacilli diversi magnitud.

The value of these bacilli cannot be overestimated when fistulous tracts or inaccessible wound-surfaces are to be medicated. In endometritis, cystitis, pyothorax, and certain urethral affections, the iodoform-bacilli are evidently of great worth.

(*f*) As iodoform-vaseline. This salve varies in the amount of the drug contained from twenty to fifty per cent., and is used as an application to venereal ulcers.

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THE KERATOSCOPE.

Read before the Philadelphia County Medical Society, May 16, 1883,

BY M. LANDESBERG, M.D.

ALLOW me, Mr. President, to present to you a new instrument, which is of very great use in the daily ophthalmic practice. It is the keratoscope, devised after Javal's suggestions by Dr. A. Placido, of Oporto (Portugal), in order to obtain by simple means, and without much loss of time, a correct view of the topography of the cornea, and to ascertain any difference of curvature between the different corneal meridians, or in the different segments of the same meridian. The instrument is based upon the principle of using the reflex images of the cornea to detect any asymmetry or irregularity of the latter. This principle lies at the base of the ophthalmometer of Helmholtz; but this ingenious instrument is very difficult to manage, and can, therefore, only be used for strictly scientific investigations. The modified ophthalmometer of Coccius is also too complicated to be used in the office-hours of the oculist. Placido's keratoscope supplies the wants of practice. It is simple and handy, and can be used as conveniently as our common ophthalmoscope. It consists of a metallic disk of twenty-three centimetres in diameter, with a circular hole of five millimetres in diameter, and with a handle. The front side shows alternate black and white concentric rings, while the back side presents a plain, black surface, with a small cylinder adjusted to the circular opening.

The examination is made in the following manner. The patient is seated with his back to the window; the physician stands before him, lifting with one hand the upper lid of the eye examined, and holding with the other the instrument before his own eye, through the cylinder of which he looks at the patient's cornea, at a distance of about six inches. The concentric black and white rings on the front side of the instrument are the object, the diminished reflex images of which are projected on the cornea of the patient and are seen by the physician. Care should be taken that the patient should fix the central hole of the disk, and that the latter should be kept perfectly vertical, parallel with the visual line of the observer, as well as with that of the subject under examination.

If we examine in this way a normal cornea, we will obtain the reflex image of perfect circles. Any deviation from the normal curvature of the cornea will show itself by the distortion of these circles. The inference as to the great use of the keratoscope for the diagnosis of astigmatism and keratoconus is obvious. But it is no less valuable a contrivance to ascertain the existence of any increased tension of the eyeball, and to detect any deviation of the latter from the normal position.

The existence of abnormal regular astigmatism is shown by the fact that the circles of the keratoscope appear in the reflex image elongated in the direction of the weakest meridian. They assume the form of ellipses, the short axis of which will correspond to the meridian which has the shortest focal length. After operation for cataract we can see at a glance how the vertical meridian of the cornea has been flattened: the peripheric circles of the disk appear in the reflex image elongated and slightly eccentrical.

In irregular astigmatism the centre of the disk appears in the reflex image eccentrical; the circles are irregular, drawn to one side or to the other, in some parts bent or crooked.

In keratoconus we have, instead of circles, irregular and broken lines; in many instances the centre of the disk appears in the reflex image double.

Hasner was the first to avail himself of the keratoscope in order to test the ocular tension. If, while inspecting a normal cornea with the keratoscope, we press with the tip of a finger upon the eyeball, we will find that the concentric circles will undergo a change: they will become distorted because the cornea has also changed its shape. In glaucomatous conditions of the eyeball, pressure upon the latter, however, will either not produce any change whatever in the shape of the cornea, or but a very imperceptible one. In either instance the configuration of the circles in the reflex image will remain unchanged.

To find out with the keratoscope whether there is any deviation in the equilibrium of the ocular muscles, we proceed as follows. The keratoscope is kept strictly in the meridian line, and we direct the patient to fix straight with both eyes the central hole of the disk. If there be perfect co-ordination of the ocular muscles, the reflex images will be at corresponding points of the two cor-

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neæ; but if the equilibrium of the muscles be disturbed, the reflex images will appear on different points of either cornea. In this way we are able to detect, with the greatest accuracy, the slightest lateral deviations of the eyes, particularly minute differences in the height, which may escape our mere ocular inspection. This method is of very great use in instances of paralysis of the ocular muscles.

If, in instances of convergent or divergent strabismus, we cover the fixing eye and the squinting one assumes the fixation, the slightest change in the position of the latter eye is most clearly brought to view by the displacement of the reflex image, which is the inverse of the motion of the squinting eye.

REMARKS ON HYDROPHOBIA.

Read before the Philadelphia County Medical Society, May 23, 1883,

BY CHARLES W. DULLES, M.D.,

Surgical Registrar to the Hospital of the University of Pennsylvania, Surgeon to the Out-door Department of the Presbyterian Hospital.

IN that part of his "Medical Inquiries and Observations" in which Dr. Benjamin Rush speaks of hydrophobia, he says, "In entering upon the consideration of this formidable disease I feel myself under an involuntary impression somewhat like that which was produced by the order the King of Syria gave to his captains when he was conducting them to battle: 'Fight not with small or great, save only with the King of Israel.'"

It is with a similar feeling that I come before you this evening. For the more I have studied the subject of hydrophobia the more have I felt the intricacy of the problems it presents for solution, and the difficulty of formulating an opinion in regard to them which shall avoid the mistake, on the one hand, of too great credulity, and, on the other, of too stubborn a scepticism.

This difficulty is so great that I have no idea at this time of attempting to discuss the subject in general, but simply to consider the state of knowledge in regard to it, and to inquire whether this cannot in some way be improved.

More than a year ago I was called one morning to attend a boy who, about a month after being bitten by a dog, had fallen into a state presenting an almost typical picture of what is known as hydrophobia. The course of this case (which I described before the West Philadelphia Medical Society: see *Medical News*, May 27, 1882) was brief and striking. Notwithstanding every effort that could be suggested from my own stock of knowledge, and from the larger one of Dr. C. K. Mills, whom I asked to see the case with me, the young patient passed through an extremely interesting series of phenomena of sensori-motor and ideo-motor excitation, and, within twelve hours after I first saw him, died.

The scenes of this day put to a sharp test my previous convictions in regard to hydrophobia, and left me in a state of uncertainty as to their correctness, which has prompted me to give a large part of my leisure during the last fifteen months to the work of studying what others have thought and written about it.

For those who would study the subject of hydrophobia exhaustively there is a mass of literature whose great extent may be estimated from the fact that in the "Literatura Medica Digesta" of De Ploucquet, published in 1808, there are sixty-four quarto columns of titles on Hydrophobia and Rabies. Besides these, there have been many writings which are not included in this list, and which have appeared since it was collated. A great part of the literature of hydrophobia, though curious and interesting, is but unprofitable reading. Yet happily he who will be satisfied to learn the most salient features of the disorder in a sort of epitome may find excellent accounts of its history and phenomena, and full discussions as to its nature, in certain articles contained in general treatises. Of these I would name the article on "Hydrophobia," by J. L. Bardsley, in Forbes's Cyclopædia of Practical Medicine; that on "Rabies," in Copland's Dictionary of Practical Medicine; that on "Hydrophobia," by Ernest Hart, in Cooper's Dictionary of Practical Surgery; that on "Hundswuth," by Reder, in Pitha and Billroth's Handbuch der Chirurgie; that on "Wuthkrankheit und Wasserscheu," by Virchow, in his Handbuch der Speciellen Pathologie und Therapie; that on "Hydrophobia," by Bollinger, in the translation of Ziemssen's Cyclopædia; and, finally, those on "Rage Animale," by Signol, and on "Rage Humaine," by Doléris, in the recently-issued Nouveau Dictionnaire de Médecine et de Chirurgie. So far as my observation goes,

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there is not a single monograph on hydrophobia which can be compared, in interest or in instructiveness, with these articles.

But no one can claim to have gotten at the best that has been said and written about this subject unless he has gone over the papers and discussions upon it read and spoken before the French Académie de Médecine during the last twenty years, where may be found the views of Tardieu, Trolliet, Trousseau, Villermé, Vernois, Raynaud, Lannelongue, Leblanc, Boudin, Decroix, Colin, Pasteur, Galtier, and Bouley, —all names inseparable from the history of hydrophobia. Nor can one be said to have completed even an elementary course of reading unless he has acquainted himself with the writings of Lauder Lindsay on "Madness in Animals," and kindred subjects, in the *Journal of Mental Science* for 1871, 1877, and 1878; as well as with those of Daniel H. Tuke on "The Influence of the Mind upon the Body," in the same magazine for 1870, 1871, and 1872. I would also strongly recommend to every investigator a very valuable series of articles —not referred to by a single writer on hydrophobia—on the Physiology and Pathology of the Saliva, by Dr. Samuel Wright, which were published in the London *Lancet* during 1842 and 1844.

Even this curtailed list may seem a sufficiently long one; but it is, as has been intimated, small compared with the mass from which it has been selected.

A cursory glance over the history of hydrophobia discloses the fact that the first authentic record of its occurrence was made about three hundred and fifty years B.C., by Aristotle, who, singularly enough, says that dogs are subject to *lyssa*, or madness, and that all animals bitten by mad dogs become rabid, except man. After Aristotle there is no authentic allusion to it to be found until the time of Cælius Aurelianus, who gave a good account of its symptoms. About the time of the Christian era it begins to be mentioned pretty regularly by medical writers, Dioscorides, Celsus, Galen, and others speaking of it specifically. After the time of Galen a wider and wider departure from the simple dictum of Aristotle is to be observed. So far from holding man exempt from the communication of rabies even from mad dogs, he came to be considered not only liable to it, but liable from bites of a great variety of rabid animals, such as dogs, cats, wolves, foxes, bears, and even men. At the same time records began to accumulate of hydrophobia acquired in other and most fantastic ways. Thus, the contagion was attributed to eating the flesh or drinking the milk of rabid animals, to breathing the exhalations of a person already affected. It was said to have been conveyed by fomites, by kissing, by coitus; and it was a question whether it might not descend by heredity. It has been credited to the bite of a boy by an angry comrade, and even to a bite inflicted upon himself by a man in a passion; while there are single cases where it has been seriously believed that hydrophobia was caused by the bite of a duck and by the peck of an angry cock. It will not be surprising, after this, to hear that hydrophobia has been attributed to the bites of dogs not rabid, or that it has been believed to have arisen spontaneously in man as well as in the lower animals.

This process of development extended also to the symptomatology of hydrophobia. From a condition fitly expressed by the word "mad," it came to be regarded as one in which there was a simulation of the canine nature. Patients no longer simply fell sick and dreaded attempts to drink water; now they began to act like dogs. They howled and barked and tried to bite. They were said sometimes to turn round and round before lying down, as dogs are often seen to do. Their eyes were said to glow in the dark like those of cats.

The reputed length of the period of incubation of hydrophobia bears the marks of a similar process. Originally we find nothing said about such a period. Aristotle says all animals bitten by a mad dog become mad. The inference is that they do this in a reasonably short time, as they die after being bitten by venomous serpents. But after a while the idea of an incubation comes in, and grows and changes until its length is variously estimated from half a day to twenty—even to forty—years.

Finally, as was natural, while the notions in regard to the causation and the character and order of the manifestations of hydrophobia underwent such change, the methods of treatment multiplied and became more remarkable. Pliny recommended eating the raw liver of the dog that did the biting, or the saliva from under his tongue. Celsus advised throwing the victim of hydrophobia unexpectedly into a pond, when

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if he could not swim he was to be allowed to sink, and if he could he was to be held under until he was filled with water. Charms, mummeries, and nostrums—some of the most repulsive character—were constantly employed both to avert the outbreak of hydrophobia and to cure the fully-developed disorder. Bleeding, saturation with mercury, and such medicines as belladonna, opium, prussic acid, and the venom of the viper, were used, not to speak of the heroic method of suffocating the subject of hydrophobia between two feather beds for his own good and for the safety of others.

Thus, under a constantly-accumulating supply of testimony and with an ever-increasing pretension to knowledge, the ignorance of the medical faculty in regard to hydrophobia grew more and more profound. Here and there a writer rejected some egregious absurdity; but the current of misapprehension and error grew stronger and broader until it swept before it even the best intelligences so late as the beginning and middle of the last century. Towards its end protests began to be made and efforts to extricate the subject from the mass of falsehood with which it was encumbered. But how mistaken some of these efforts were may be gathered from the fact that so able a man as the late Dr. Rush regarded hydrophobia as a malignant fever,—though this ought not to be stated without adding that he, with the modesty of true greatness, acknowledged that he might have been misled by the principles of fever he had adopted, and hoped the reader might not be discouraged by his errors from using his reason in medicine.

The present century has supplied almost everything that can be considered of value in forming a correct opinion of the nature of hydrophobia. This is largely due to the advances that have been made in experimental pathology and veterinary science, and more than all to the incomparable researches of both veterinarians and medical men connected with the French Academy of Medicine during the last thirty years. The outcome of these researches has led Doléris to the roseate opinion that our pathological knowledge concerning rabies "is but little behind that which we possess about the majority of diseases of the same order thus far studied."

But it is not necessary to go so far as this to do justice to our own age, for it is not without its own faults of pretension and credulity, and if we examine the state of knowledge in regard to hydrophobia as it is represented by the most recent writers, we find that it is still dark, confusing, and unsatisfactory.

As to its causation, for example, we find that Virchow admits the possibility of contagion by the handling of sabres used to kill rabid dogs. Decroix, so recently as 1863, felt called upon to eat the flesh of a rabid dog, both raw and cooked, to disprove that this could communicate hydrophobia. Vernois, about the same time, said it could be conveyed from man to man; and Bollinger admits the possibility of its communication by the migrations of small animal parasites.

As to its incubation, while Dolan says this varies from one to three months, and that there is a scientific certainty of escape if an outbreak does not occur within a year, Trolliet credits a case where the period was less than a day; Doléris says fifteen months is as long an incubation as is indubitable; Bollinger is credulous up to two years; while Drs. Harrison Allen and H. C. Wood, of this city, had in 1881 a case they considered one of hydrophobia where the inoculating bite occurred three and a half years before; and Sir William Gull (*Lancet*, November 17, 1877, pp. 745, 746) records a case that came under his own observation in which he says the period of incubation was thirteen years.

A consideration of the symptoms attributed in most recent times to hydrophobia discloses no less confusion than exists in regard to its means of communication and period of incubation. There is a certain agreement as to its general character, but there is the greatest possible disagreement as to its details. According to many authors, at its outbreak the site of the inoculation wound manifests changes of an irritative nature. It is said to become painful, to be the starting-point of peculiar sensations or of wandering pains. At times it changes color, reopens, and discharges an ichor. Others, and the great majority of observers, have not seen any such phenomena.

The manifestations of general constitutional disturbance, also, have been different and even contradictory. The striking symptom of dread of water, which gives the disorder its name and which the accounts prove has been relied on as pathognomonic in a multitude of cases, is by

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the best authors set down as of little diagnostic value, being absent in many cases of real hydrophobia and present in all or almost all spurious cases, while rabies in the lower animals is marked by a great greed for water. We may also recognize even among modern writers and reporters of cases a singular disposition to attribute to hydrophobia a resemblance to canine characteristics. Barking, biting, and howling like dogs are set down over and over again as symptoms, when their occurrence is in fact rather a strong ground of suspicion that the case is one of spurious hydrophobia. Such a case was reported last year by Decroix, and said to have been cured by pilocarpine, but it was disproved by Bouley. Some writers attach importance to the presence of albumen in the urine. The latest example of this which I have found is in a clinical lecture by Dr. Bristowe, senior physician of St. Thomas's Hospital in London, published in the *British Medical Journal* for April 21 and April 28 of this year (1883). But, in fact, the presence of albumen is inconstant, and its value as an evidence of hydrophobia is impaired by the frequency of its appearance in other convulsive disorders.

Again, some of the most eminent of recent writers speak of satyriasis and nymphomania as phenomena of hydrophobia. These manifestations are not only remarkable, but also of a suspicious significance, when it is observed that they present themselves only within certain geographical limits. Thus, they have been observed in France and Germany, but not in England. Grisolle records a case called hydrophobia where a man practised coitus thirty times in a night, and Reder another where the wife was "stormed," and where there was continual erection of the penis and ejaculations, often with some blood following; while Bardsley says that there occurs no satyriasis or nymphomania in Britain, and I have found no record of its occurrence in America.

About the character of the convulsions of hydrophobia there is substantial agreement among modern observers. They are rarely tetanic, but of an intermittent and clonic kind. Yet there can be little doubt, in reading many of the accounts, that they were caused, or at least aggravated, by the handling patients have received from their attendants. To understand this, we have only to picture to ourselves the mental condition of the victims of this disorder who were treated according to the method of Celsus, or whose neighbors thought it an act of humanity to smother them between feather beds. To a lesser degree such excitements are probably produced in almost every case in consequence of the ignorance and fear of the by-standers. In the case which I had, and which was as near typical as could be imagined, the violences of my patient ceased immediately upon my removing the restraints against which, on my reaching him, I found him furiously struggling.

Let us now turn our thoughts for a moment to the issue of hydrophobia. Most modern authors regard it as inevitably fatal. From time to time cures have been reported. They were commonest in the heyday of those violent methods of treatment which the present generation condemns as cruel, or of those fanciful remedies which it regards as absurd. The use of charms and nostrums claims its cures, and so do ducking, and bleeding, and mercurial saturation, and such violent poisons as belladonna in large doses, and prussic acid, and, last of all,—in our own days,—pilocarpine, oxygen, and curare. How this latter has sometimes been administered may be seen in the lecture of Dr. Bristowe, published only a month ago (*British Medical Journal*, April 21 and 28, 1883), where the lecturer says he gave hypodermically, within twelve hours, doses of curare which, when added together, I find amounted in all to more than *seven and two-thirds grains!* This patient did not recover, however, and the lecturer admits that after its use he learned that the curare had been kept in stock for some time and probably was not of full strength.

But perhaps the most confusing aspect of the present condition of knowledge about hydrophobia is seen when we direct our attention to the teachings in regard to its pathological lesions. In addition to the physical peculiarities said by some observers to be discoverable at the seat of the inoculation wound,—namely, breaking out anew and discharging an ichorous secretion,—a specific form of vesiculation was described by Urban, about the beginning of this century, as occurring just before or at the time of the outbreak of the disorder. And this statement of Urban's has secured a certain number of believers.

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Others, even very recently, have looked for and found the *lyssi* under the tongue, described first by the ancients, and again, in the beginning of this century, by Marochetti, an Italian adventurer, who said he had learned from the Cossacks of the Ukraine the secret of their significance, and that their removal eliminated the virus from the system. Others still have found lesions of the fauces, of the salivary glands, of the respiratory and digestive tracts, or of the brain, spinal cord, and nerves, which they hold to be pathognomonic of hydrophobia. But all these have been shown by other observers to be inconstant and unreliable. They are declared to be effects, not causes, and in some cases clear evidence that the disease was something other than hydrophobia. Even such a writer as Bollinger, who contributes the article on hydrophobia in Ziemssen's Cyclopædia, and whose credulity in regard to the communication of hydrophobia has already been alluded to, denies that post-mortem examination of dogs or men has contributed anything of value to our knowledge of the pathogenetic process of rabies or hydrophobia.

It might be expected, of course, that a microscopic germ, lying at the bottom of all the trouble, would be pointed out; and, indeed, Hallier has described one, which he named the *lyssophyton*, the like of which Klebs says he too saw. But the Milan Commission appointed to investigate the subject of hydrophobia soon exploded this error. Not very long after this, Pasteur made some experimental inoculations with the saliva of a patient supposed to have died of hydrophobia in a Paris hospital, and rushed before the public with the announcement of a germ he had discovered peculiar to the disorder induced by inoculation with rabietic saliva. But that this was a premature assertion he himself soon found by experiment, and frankly acknowledged that similar effects to those of the inoculation of his supposed rabietic saliva were produced with the saliva of patients sick of other diseases, and even with that of perfectly healthy individuals, —experiments which have been repeated and confirmed by Sternberg and Formad in this country.

And now let us turn our attention to some of the views in regard to the nature of hydrophobia entertained in modern times.

Dr. Rush says, "The disease produced in the human species by the bite of a rabid animal is a malignant fever."

Dr. Physick thought that in hydrophobia death was due to spasmodic constriction of the glottis, and suggested opening the trachea for its relief.

Copland asks, "Is the secretion merely the vehicle of a nervous aura or emanation, which is actually the infecting agent, and which is retained by its vehicle only for a time?" Again, he says, "The supposition, lately published, that there is no such specific disease as rabies, and that it is merely the result of mental anxiety, etc., is only one of the absurdities thrown up on the surface of medical doctrine, and hardly deserves mention, and much less refutation."

Tardieu rejects the idea that it is a disease of imagination and fear, saying that the commission of which he was a member reported thirty cases under five years of age. He believes, also, in the occasional spontaneous origin of rabies, and gives two cases, one a cat which became rabid from a burn, and the other, also a cat, which became rabid from being robbed of her young.

Jolly, speaking before the Académie de Médecine, turns the tables on the doubters by asking who knows but that hydrophobia acquired by a forgotten bite may have been mistaken for acute meningitis, tetanus, pernicious cerebral fever, acute mania, or other nervous affections? He believes that it may be caused by the bite of a non-rabid dog, and credits a case where a young woman acquired hydrophobia by being bitten by a dog she was suckling,—the dog not being rabid, but only irritated by a correction.

Pasteur, whose acquainfance with rabies is not very great, asserts most positively that he has produced it by inoculation of fragments of the medulla and frontal lobe of the cerebrum and the cephalo-rachidian fluid, and that the incubation is shortened and the communication made surer by inoculating on the surface of the brain, and by using the unadulterated cerebral substance of a mad dog.

Bouley, by far the most careful and thorough student of this subject in France, agrees with Boudin that there does not exist a *scientific* proof of a single case of spontaneous rabies, and illustrates the difficulty of getting at the actual truth about so-called cases. He quotes Renault as

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being a most scrupulous observer, and as telling him and Reynal that after thirty years of research there were only three cases of rabies that he dared to consider certain, and that for these he trusted to the fact that he had got the details from persons he considered entirely trustworthy. Bouley, uncertain in regard to the possibility of a spontaneous origin of rabies, illustrates the difficulty of getting at the truth by a capital story, and immediately afterwards furnishes in himself an example of the error to which this difficulty may lead, by saying he would be positive of such an origin if he had some more facts like those given by Leblanc *fils*,—the latter being a history of a case which was subsequently *detectived* by Decroix and shown to be the very opposite of what Leblanc *fils* believed, and, in fact, a clear case of inoculation.

Virchow believes that certain individuals have a predisposition to hydrophobia. He believes in a specific virus, and that it is transmissible by retro-inoculation. He admits the probability of ancient accounts of its transmission by means of weapons used to kill mad dogs with, and by scarifying and blood-letting instruments.

Roucher calls "very probable" a case of communication, by suckling, from a negro woman to her child.

Doléris fully accepts the specific theory of hydrophobia, believing that it is caused by the inoculation of a distinct virus which elects the nerve-centres. He believes the virus resides in a germ, and quotes Nocard as having obtained from saliva, *by dialysis*, a solid substance which, being inoculated, produced "positive results,"—which the liquid parts did not.

Bollinger denies the spontaneous origin of rabies, but intimates that fleas and lice may transfer the poison and thus produce inoculation. He also admits that meat and milk may communicate it, though this is "extremely rare." He says further, "The poison is only in very rare cases communicated in any other way than by the bite of a rabid animal: such cases, for example, are those in which infection takes place by means of *coitus* [!], or through intermediate vehicles, or by the consumption of milk." He considers hydrophobia to be inevitably fatal.

Many other authors might be quoted who, though differing very materially in certain details to the details of hydrophobia, have stand th[illegible] all been believers in its specific nature and inoculability.

But there have not been wanting in modern times those who have been led to other views by observing the discrepancies in the facts and theories of these very believers. Bosquillon, a physician to the Hôtel-Dieu in Paris, in the beginning of this century made a vigorous, though at that time futile, stand against the commonly-received opinions about hydrophobia. He pointed out the unreliability of the evidence upon which the belief in its specific nature rested, and the influence of the imagination in producing morbid physical and psychical conditions. He claimed that the ravages of so-called hydrophobia were increased by the popular education on the subject,—in other words, by the very means taken to warn and defend the community against it.

Girard and J. Simon supported the views of Bosquillon. Not long after, White demonstrated his conviction that hydrophobia was not caused by the inoculation of a virus peculiar to the saliva of a rabid dog, by inoculating a variety of animals, and, finally, himself, with such saliva,—all without injurious results.

Maschka, in Prague, and Lorinser, in Vienna, have denied the specific nature of hydrophobia.

Dr. Burder (in the *British Medical Journal*, October 26, 1872) bases a like opinion upon the incubation, which is without parallel in other diseases, upon the similarity of the phenomena of hydrophobia to those of other nervous disorders, upon the sufficiency of the imagination to excite all the symptoms, upon the tendency to invent a connection between the phenomena and a bite, upon the frequent absence in cases of so-called hydrophobia of sufficient evidence of rabies in the dog which did the biting, and upon the frequent lack of good evidence of any bite at all.

Professor Dick, of Edinburgh, says hydrophobia is not the result of any poison introduced into the system, but merely the melancholy and often fatal result of panic fear and of the disordered state of the imagination.

Professor Macleod, of the University of Glasgow, said,—after a scare in consequence of which eleven hundred and fifty-five dogs had been killed by police regulation,—"There is a large lot of nonsense talked about hydrophobia, and people need not be in the least afraid of it."

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Dr. Tuke says, "Among the admitted difficulties attaching to the pathology of this disease, that is surely not the greatest which acknowledges the power of the imagination in combination with fear to excite not only a paroxysm in the course of the disorder, but to originate a group of symptoms by central excitation, which, in a susceptible state of the nervous, closely resemble those of genuine rabies." As an illustration of this, he cites a case from Trolliet, where a man, having been bitten by a dog, had no symptoms until three and a half months afterwards, when a dog one day attacked his horse. In a few days hydrophobia manifested itself, and he died on the third day after.

M. Girard de Cailleux, Inspector-General of the Service of the Insane for the Department of the Seine, has called attention to the similarity of the symptoms, course, duration, termination, and cadaveric lesions of acquired hydrophobia (*rage communiquée*) and of acute febrile delirium, saying that this "establishes an identity of nature worthy of attention."

Dr. Lauder Lindsay says, "Hydrophobia in man is frequently, if not generally, the result of terror, ignorance, prejudice, or superstition, acting on a morbid *imagination* and a susceptible nervous temperament." (*Journal of Mental Science*, July, 1871, p. 185.) Again, he says, "It furnishes one of the best examples that could be adduced of the wonderful influence of the mind over the body, and of morbid mental conditions in the generation of fatal physical disease." (*Journal of Mental Science*, January, 1878.)

Finally, I would quote the opinion of our fellow-member Dr. C. K. Mills, who, after seeing three cases of so-called hydrophobia and making a post-mortem examination of a fourth, has said that, while he would not assert positively that there was no such disease as hydrophobia in man, he was prepared to say that he believed all the cases so called could be explained on some other hypothesis, such as that of lyssophobia, tetanus, chronic or acute nerve-lesions, extravasations, etc. (*Medical News*, May 27, 1882, p. 585.)

We see, then, that the study of hydrophobia, as the subject is presented to us in both ancient and modern writings, is in the highest degree unsatisfactory. Where so many contradictions are found there must be a great deal of error. If, now, we attempt to form an opinion for ourselves, we must, I think, find some way to escape from the influences which have introduced so much confusion in the minds of others. It has sometimes appeared to me that we would be no losers if the whole enormous mass of literature relating to hydrophobia were swept away and an opportunity afforded to begin the investigation of the subject without bias by the careful and critical observation of such cases as may arise from time to time, and with the stern determination to eliminate every particle of evidence which is not of a reliability commensurate with the delicacy and gravity of the case.

A careful study of a large number of recorded cases has convinced me that the source of most of the errors connected with this subject is to be found in a general absence of a proper attitude of criticism, together with a deficient acquaintance with the methods by which the nature of all cases of supposed hydrophobia should be tested. The former want ought for its correction to require no more than that attention should be called to it. The latter requires that medical men should be more familiar with all the conditions under which the phenomena usually attributed to hydrophobia may be produced. Here is a field especially inviting for the alienist, the student of mental and psychical phenomena. The ground has already been broken by Tuke and Lauder Lindsay. Others, it is to be hoped, will carry on the work they have begun.

NOTES OF HOSPITAL PRACTICE.

UNIVERSITY HOSPITAL.

CLINIC OF D. HAYES AGNEW, M.D., PROFESSOR OF SURGERY.

Reported by LOUIS J. LAUTENBACH, M.D.

NECROSIS OF THE TIBIA.

THE first case this morning is a man who comes with some disease of the tibia, evidently necrosis. He does not remember receiving an injury in this location: however, a scar can here be discerned.

The tibia is one of the bones which is very frequently the subject of necrosis. It lies subcutaneously, and is very liable to injury. The periosteal trouble induced by an injury may extend to the bone and

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result in necrosis. The femur also, although not much exposed, is frequently the subject of necrosis. When necrosis of the femur occurs, and there is no constitutional explanation of the process, then it is probably due to the fact that this bone is surrounded by very strong muscles, which, in contracting during very violent muscular action, raises the periosteum from off the bone, thus occasioning periostitis, or, if the denuded surface be at all large, causes besides a death of the underlying bone from insufficient nourishment.

On the inside of the limb we see a large scar which remains from a former operation. The history is that the disease began in February, 1876, since which time the sinus has never healed up. With a probe entering the sinus we can pass through the external shell of bone and touch a roughened surface. We do this to determine whether the bone is loose or not. If it is, it will be necessary to remove it; but if not, we must be content to wait until separation takes place.

To remove a piece that is loose it would only be necessary to cut through the shell of new bone. In the long run such a case gains most by waiting, particularly as our patient can with comparative comfort follow his business.

The pain in the limb, he tells us, is much worse on going to bed. This is probably due to an accumulation of blood in the deeper vessels, the superficial capillaries being comparatively empty. During the day we all of necessity require the superficial capillaries to be active and full of blood. This condition not existing at night, the blood seeks the deeper vessels, occasioning fulness and thus causing the pain.

LATERAL PHARYNGEAL ABSCESS.

This colored man four weeks ago was attacked with pain and swelling of the throat, with difficulty in swallowing. Later a soft swelling was observed, occupying the lateral wall of the pharynx posterior to the last molar tooth. A swelling corresponding to this was observed on the outside of the neck.

Examining his teeth, at least two are observed to be carious. In these same teeth he had pain two years ago, but has no pain at present. Very frequently swellings in this situation are caused by the difficult eruption of the wisdom tooth, it being necessary to crowd its way where there is but little room. There is nothing of this kind here. There is no history of an injury. The group of glands occupying the sterno-cleido-mastoid region are enlarged. There is observed also a pushing out of the carotid artery, as well as enlargement of the temporal and external jugular veins, evidently showing pressure on the venous trunks.

All growths in this region which involve the glands are suspicious; they are apt to be of a malignant character. We know, however, from the rapid growth in this case that it is not of this nature. Pressing on the wall of the pharynx there is not much resistance,—it is elastic; its contents may be purulent, may be serum, or may be granulation-tissue. When I alternately press on the internal and external surfaces of the swelling, I find that it reacts one on the other, showing a communication between the two.

When there is a reasonable ground for hope that a growth is not malignant, then it is always wise to make an exploratory puncture with the needle. We find here not blood, which is apt to appear when we have a malignant growth, but pus, which tells us that we have here an abscess of the lateral wall of the pharynx. Now depress the tongue, and with a straight bistoury open the abscess from within, and we see here a large accumulation of pus which has flowed out. Without the use of the exploring-needle it would not have been possible to determine positively the nature of the case. The carious teeth, which have probably been the cause of this trouble, should be removed as soon as possible.

GONORRHŒA WITH HYDROCELE.

This man has an enlargement of the scrotum, particularly of the left side. It has been examined by transmitted light and found to be a hydrocele. The swelling does not give him any inconvenience, it being of a moderate size. It is best to let him go for perhaps four or five months without removing the fluid. The operation consists in puncturing, removing the fluid, and, if a radical cure is desired, injecting tincture of iodine into the sac.

Besides this, the man is suffering from specific urethritis. The discharge began three days ago, and the inflammation has

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extended over the head of the penis and prepuce (balanitis).

We will order him to inject sulphate of zinc, a grain to the ounce, three times a day, it being retained for about five minutes, while the under surface of the penis is being gently rubbed by the hand. In two days he is to use a two-grain solution, and in four or five days a three-grain. If this does not smart, he can go up to four or five grains. Under this treatment the discharge will stop in about ten days.

There are various internal remedies used in such cases. Here we will use capsules of balsam of copaiba, each containing ten minims, four or five times a day. The administration of this remedy facilitates the cure of the disease.

In order to avoid the expense and worry of the frequent journey to the apothecary, I am in the habit of ordering the strong solution at once, and letting the patient dilute it to the requisite amount. For instance, I prescribe—

℞ Zinci sulphatis, gr. vi,
Aquæ, f℥i.
M.—Ft. solutio,

and order him to use it at first in the proportion of one part of the solution to four or five parts of water.

UNUNITED FRACTURE OF THE FEMUR.

This man, aged 50, came to us this morning with the history that three years ago he fell on the right hip, and in consequence of the injury he has not been able to work since.

Looking at the limb, we see that the right one is a little atrophied: this can be accounted for by the rest to which it has been subjected. Placing the two limbs together, we see that the right is the shorter. Measuring from the anterior superior spinous process to the lower edge of the internal malleolus, the difference is found to be one and a half inches. On attempting to turn the foot of the sound limb outward, there is a good deal of resistance; scarcely any is felt on endeavoring to do the same with the other limb. Measuring the distance from the trochanter major to the anterior superior spinous process, there is a difference of one inch, it being so much shorter on the injured side.

Eliminating luxation, but two explanations are possible,—one that there is a fracture of the neck, the other that it is a case of absorption of the neck.

Testing the mobility, I find here a crepitation which I take to be the crepitation of an ununited fracture. However, we must be very cautious at this length of time in saying this positively, as necessarily the ends of the bones must be very much rounded off. When he walks, the trochanter slips up as soon as he puts his weight upon it. He walks very badly, the trouble being, probably, that he has not tried enough. (Patient sent out.)

The trouble with such patients is that they come here for an opinion, and as soon as they have obtained this they go and see their doctor. This fracture occurred at 47 years of age, a little under the time when intra-capsular fractures are liable to occur, although there are cases where intra-capsular fractures have occurred at an earlier period than this.

NECROSIS OF THE FEMUR.

This lad was sent to the hospital with, as you see, evidences of considerable disease of the thigh. It is very much enlarged, and there is a sinus which I doubt not leads down to diseased bone. There is, besides, distortion and considerable shortening of the limb.

This condition might possibly have arisen from hip-joint disease, but it is not due to this cause, as the limb can be well flexed on the pelvis. Besides this negative evidence, the marked enlargement points to necrosis of the femur. The inflammatory infiltration of the soft parts also points to necrosis. Using now the probe, the diseased bone is easily felt. The scars on the thigh make it appear that the actual cautery has been used to subdue the inflammatory disease of the bone. So far as my experience goes, it is of no use whatever. This case is at a part of its course where the best treatment is to remove the necrosed bone. In order to do this, we must first admit him to the hospital.

FOREIGN BODY SUPPOSED TO BE IN THE RESPIRATORY PASSAGES.

This girl comes here with the impression that there is a breast-pin in her throat. Often operations have been performed in just such cases, and no foreign body found. It is always best to see the foreign body before performing an operation.

The breast-pin was an old-fashioned cuff-button, to which a pin one and one-half inches long had been soldered. This she

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swallowed three years ago, and six weeks afterwards she was operated on and no breast-pin found.

Some moist râles are found over the girl's chest, but they are not such as we would expect from such a large body. In such cases there is a profuse discharge of mucus in the air-passages, and very moist râles are present; then, also, there are violent paroxysms of coughing, with attacks of impending suffocation. The suffocative paroxysms are not so bad when the body is large as when the body is small. The small body slipping up and down with each act of respiration occasions a reflex irritability by rubbing against the walls of the larynx and perhaps touching the vocal cords.

There have been no violent spasms or suffocative attacks at any time. Probably the body has gone along the alimentary canal, and not into the air-passages.

TRANSLATIONS.

CHARCOT AND PITRES ON CEREBRAL LOCALIZATION.—From a *résumé* of forty-four cases of various lesions of the cerebral cortex, Messrs. Charcot and Pitres conclude that they prove that there exist certain regions of the brain the destruction of which is not followed by any permanent impairment of voluntary motion. Isolated lesions of the pre-frontal lobes, of the parietal lobes, of the sphenoidal lobes, or of the occipital lobes do not of themselves, necessarily, give rise to permanent motor paralysis. The cerebral convolutions, the integrity of which is necessary to the production of voluntary movements in man, are the ascending frontal and parietal gyri and the paracentral lobule. However extensive a lesion of the cortex may be, if it do not directly or by compression or irritation in the vicinity affect the convolutions just named, they do not give rise to motor troubles.

In a recent work on "Localization of the Cerebral Functions in Man," M. Exner broaches the view that the extent of the area of the so-called latent zone is not equal in the two hemispheres. According to this author, the motor zone should be more extended in the left than in the right hemisphere, and the latent zone is therefore larger in the right than in the left. The cases just summarized do not warrant this opinion: according to Messrs. Charcot and Pitres, the non-motor areas in the two hemispheres should be considered as symmetrical. In each side the non-motor zone comprises all the convolutions except the two ascending convolutions and the paracentral lobules.—*Revue de Médecine.*

TOTAL EXTIRPATION OF CARCINOMATOUS UTERUS.—Sänger, of Leipsic, reports (*Sep. Abdrück Archiv f. Gyn.*, B. xxi. H. 1) two cases of successful extirpation of the uterus through the vagina for malignant disease. The first patient, 51 years of age, suffered with ulcerative carcinoma of the cervix uteri; the operation of Czerny and Schröder was performed, and was followed by considerable hemorrhage, which continued after ligature *en masse*, and only ceased after the application of a tampon. Four months afterwards, cancer returned, and in the course of a few months later an intestino-vaginal fistula developed, and the patient finally perished of exhaustion, ten and a half months after the operation. The second case was 36 years of age, and had a commencing cancer of the cervix. The uterus and both ovaries were removed, and the patient made a good recovery. Six months after the operation the patient appeared entirely well, with her general health greatly improved and no sign of a return of the disease.

ANATOMICAL LESIONS OF MYXŒDEMA.—In a well-marked case of a man, 36 years old, who had suffered with myxœdema, Dr. Hemot found the nerve-trunks in the neighborhood (vagus, glosso-pharyngeus, plexus brachialis) very materially thickened. The most marked alterations, however, occurred in the brain and sympathetic. A tumor the size of a small hen's-egg was found at the base of the brain, flattening the optic chiasm. The main cord of the sympathetic, and all its glands and efferent nerves, were much hypertrophied, especially in the cervical region; the semilunar ganglion and solar plexus were also enlarged. Microscopic examination showed true hypertrophy of the normal elements (Virchow's hyperplasia). Four autopsies of myxœdema have been published, but this is the first which showed alterations in the nervous system: it remains to be seen if the very marked anatomical changes have any connection with the disease.—*Gazette des Hôpitaux*, No. 23.

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THE PATHOLOGY OF LUPUS.—In a communication to the *Berliner Klinische Wochenschrift* (No. 19), Drs. Pagenstecher and Pfeiffer report that secretions taken from the conjunctival sac of patients suffering with lupus, when injected into the anterior chamber of the eye of rabbits, produced an artificial disease of the iris, containing elements which were recognized as tubercle bacilli. The authors conclude that "if Koch's bacillus is actually the specific sign of tuberculosis, which we do not doubt, the proof is here brought forward that lupus is to be regarded as a localized tuberculosis." This coincides with the view of Demme, quoted previously. — *Deutsche Medizin. Zeitung*, No. 22.

ARREST OF DEVELOPMENT OF ONE SIDE OF THE BODY.—At the meeting of the Berliner Medizinischen Gesellschaft, Dr. Mengel presented a case of hemi-atrophy of the face in a girl 23 years of age, which disparity gradually occurred during a period of five years, from the seventh to the twelfth year of age. The left side of the face was perceptibly smaller than the right, and the corresponding hand and foot were also smaller than their mates. Dr. Mengel had only been able to discover two similar cases, as it differs from most of the cases of hemi-atrophia facialis in the accompanying atrophy in the hand and foot.

AMYLIC ALCOHOL IN WINE.—From an examination of samples of natural wine of Bordeaux and Alsace, M. Henninger detected, besides the ethylic, a considerable proportion of other alcohols, especially of amylic, propylic, butylic, etc. The results of a number of analyses demonstrated that natural wine contains a notable proportion of amylic alcohol, or fusel oil, which is highly poisonous, and which is also found in the spirits distilled from grains, in gin, and in some kinds of brandy.—*Le Progrès Médical*, No. 22.

THE THERAPEUTICS OF EPILEPSY.—Two cases of marked improvement of epilepsy after the administration of atropine are reported by Dr. Max Weiss, who declares that this agent is free from the disagreeable effects of the bromine preparations, and is efficient, in small doses, in lessening the force of the paroxysms and increasing the interval between the attacks. It is useful in all forms of epilepsy. After prolonged administration a decided tolerance is established, so that the dose may be materially increased without causing toxic symptoms.—*Centralblatt für die Ges. Therapie.*

DEATH FOLLOWING EXTRACTION OF A TOOTH.—Two cases of death after extraction of teeth, from infection of the wound, are reported in *Wratsch.* Both were strong, healthy men. The reporter, Dr. Sacharewitsch, recommends the careful disinfection of instruments and hands, and the use of antiseptic washes (carbolized water one to two per cent.), after extraction of teeth. After bleeding has stopped, the wound may be packed with iodoform, and sealed with cotton-wadding dipped in collodion. The pain ceased almost at once, and no reaction occurred, in nineteen cases so treated.

THE FRUIT OF MUCUNA PRURIENS.—Dr. S. Martin calls attention to the fruit of Mucuna pruriens (D. C.), which, being rich in tannin, may be used in medicine, and might become an article of commerce. It is abundant in South America, where its infusion is popularly used as an astringent and sedative for hemorrhoids, and its pulp is applied as a dressing to wounds.—*Bull. Gén. de Thérapeutique*, No. 2.

FATAL ŒDEMA OF THE GLOTTIS IN TYPHOID FEVER.—Dr. Merklein reports a case of tracheotomy for œdema of the glottis in the course of typhoid fever in a woman, 24 years of age. Previous to this complication the nares had been plugged on account of epistaxis. Probably mouth-breathing may have induced this condition of the larynx. Death followed the operation, due to hemorrhage from the air-passages. —*La France Médicale*, No. 69.

BOWDITCH'S FORMULA FOR IRREGULAR HEART.—In a discussion upon heart-disease before the Boston Society for Medical Improvement, Prof. Bowditch said that he had found the following formula of great service in relieving even the most serious cardiac affections. He had used it for the last twenty-five years. ℞ Pulv. digitalis, gr. x; pulv. colchici sem., gr. xx; sodii bicarbonatis, gr. xxx; M. et div. in pil. no. xx. These are to be taken three or four times daily at first; subsequently to be reduced until only one is taken at bedtime; the treatment to be continued for three to nine months.—*Boston Medical and Surgical Journal.*

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PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, AUGUST 11, 1883.

EDITORIAL.

NEW SCHOOL, OR NO SCHOOL.

THE public seems very much at a loss for an adjective or descriptive title that will serve to classify modern physicians who belong to no school, who subscribe to no therapeutic creed, and who acknowledge the dictum of no medical authority in the treatment of disease. It is evident that a large number of such practitioners now exist,—practitioners who represent the progressive spirit of modern medical science, who are intelligent, earnest, skilful, and successful. The term "old school" certainly does not apply to them, because comparison of their practice with that of physicians of only a few generations ago shows it to be new, and, further, because they are openly and avowedly free from all schools, following the study and practice of medicine as one of the natural sciences, and not according to any exclusive dogma or doctrine. The adjective "allopathic," invented as a term of reproach to distinguish those who did not subscribe to the absurd tenets of Hahnemannism from those who bound themselves by its doctrines, has had a longer lease of life than its merits entitled it to. It is a word of low parentage and bad associations, is untruthful, and should never have been even tacitly accepted by the profession. Hippocrates having declared that "some diseases are cured by similars, and others by contraries," the founder of homœopathy declared that physicians who did not adopt the law (?) of similars (homœopathy) must practise under the supposed law of contraries (allopathy), against which conclusion a verdict of "not proven" must be rendered. Allopathic practice—if there ever existed a sufficient number of practitioners possessing these restricted views to warrant the statement that there was such a practice—would be even more limited and intolerant than homœopathy; but it is safe to conclude that a sect to which the term allopathic could be properly applied never existed outside the imagination of the inventor of infinitesimals and the discoverer of "psora."

Indifference on the part of the regular profession, and ignorance on the part of the public, have conspired to prolong unwarrantably the existence of a word which, being a term of reproach, would be insulting to a scientific physician were it not so completely inapplicable. It seems strange that it is necessary at this late day to point out the fact that there is no such thing in existence as allopathic practice, allopathic medicine, or an allopathic doctor, and to reiterate the truth that the adjective, if it has any meaning at all, implies a restricted practice of medicine in conformity with a supposed law or dogma which has no real existence in science. The apathy (a singularly appropriate expression) of the profession has now tolerated the adjective allopathic for too long a period, and it is high time that it should be generally repudiated. No regular practitioner, without doing violence either to his intelligence or to his self-respect, can permit this inappropriate and insulting term to be applied to himself or his colleagues unchallenged. Apothecaries especially need to bear in mind the real import of this term, and that it is not applicable to the medical profession: with their aid the public may be enabled better to appreciate these facts.

A movement in this direction has already been inaugurated, and physicians in different parts of the country are beginning to protest against being classified as "allopathic" in directories, lists of registration, and other public documents. A timely resolution, advocating more general action

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in this direction, was offered by Dr. Charles Denison, of Colorado, at a recent meeting of the American Medical Association, which is still held under consideration by the Judicial Council.

It seems necessary thus to reaffirm principles from time to time, in order that the public, from which our ranks are recruited, may have a clear and just conception of the attitude of modern medicine towards all restricted methods of practice, including schools, 'pathies, and 'isms, which, as we believe, belong exclusively to a bygone age in the evolution of medical science. Some years ago, when the propriety of introducing homœopathy into the Medical School of Naples was advocated, the following reply was made to the petition: "The University of Naples is not a proper field for instruction in homœopathy, because the rational medicine which is imparted here, on the basis of the natural sciences, excludes allopathy as well as homœopathy or any other absolute system or dogma. The study of rational medicine is as far removed from the ancient allopathy, with its blood-letting and purgation, as from the recent delusion of homœopathy, with its ridiculous infinitesimal doses and similia similibus medication."

If an answer to the question of "What school?" is insisted upon, let the practitioner of modern medicine boldly and unhesitatingly reply, "The New School," a school based upon physiology, in which disease is regarded as disordered function, to which morbid anatomy furnishes the key, and whose therapeutics, untrammelled by theory, is founded upon observation and reason. As stated by Prof. Dunglison, "every judicious physician must be an eclectic;" that is, he is not only at liberty to examine all professed improvements and advances in medical science, but it is his duty to give to his patients the benefit of his investigations. This spirit characterizes the scientific practitioner, and makes him independent in his researches, unrestricted in his practice, and non-dogmatic, unsectarian, and liberal in all his relations to his professional brethren and his intercourse with the public. Must he also affiliate with a horde of ignorant and impudent charlatans that practise upon the confidence and credulity of patients? By no means. While affording to others the same facilities that he himself enjoys in the study of medicine as a branch of science, he cannot recognize as physicians those who refuse to use such facilities, nor can he meet upon any common ground practitioners of exclusive systems of medicine, or consult with them without treating them with a degree of consideration which they do not deserve, and acknowledging them, *ipso facto*, as entitled to an equal amount of consideration by the public.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

WE welcome to our exchange-list the new *Journal of the American Medical Association*, of which we have received the first issues. It is a weekly, of large size, printed on white paper, and covers thirty-two pages, exclusive of advertisements. The *British Medical Journal*, the publication of the British Medical Association, has, we fear, a substantial advantage over our Association journal, judging from the specimens before us,—an advantage which is only imperfectly expressed by its seniority: indeed, it seems unfortunate to the young journalistic experiment that it openly adopted such an elevated exemplar, or that, having done so, it did not copy it more closely. Barring typographical errors, which apparently do not show much tendency to decrease with successive issues (and among which we observe the name of the venerable editor spelled with a capital F in the middle), and the evidences of the existence of some doubt in the editor's mind as to whether it is

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the organ of an association or a society, it may on the whole be considered a very creditable piece of amateur journalism, upon which we defer criticism until the first volume is completed. From its pages we may possibly be able, at some future time, to make a few extracts for our readers.

CORRESPONDENCE.

LONDON LETTER.

THE medical profession is still eagerly awaiting the passing of the proposed Medical Bill; but the prospects of its passing are as remote as ever, I fear. Hope deferred maketh the heart sick: certainly then the medical profession ought to be sick indeed. The *ignis-fatuus* seems ever about to be, yet never is.

> "For aye since I could climb a hill
> We have been bothered with that bill.
> Ruin awaited the denial:
> 'Tis fair and just to make the trial."

The limited time which has now to elapse before the houses retire into the country to shoot grouse, share in picnics, be patrons of agricultural and horticultural shows, harangue their constituents, and point out how much time has been deliberately wasted, will, it is to be feared, be far too short for the consideration of such an entirely subordinate matter as a bill affecting the medical profession. Indeed, the present is scarcely the form of government to do anything for our profession, or, indeed, anything with which the art of medicine is concerned. It contains a large radical element; and that element has within it a large section who are homœopaths, or any 'path opposed to orthodox medicine; who disbelieve in the protective effects of vaccination, and have raised one special debate on the subject this session; who have disannulled the Contagious Diseases Act (Human), despite its excellent effects in our garrison towns; and who contemplate an act relating to the immorality of young girls, which carries within it unlimited facilities for extortion.

Up to this upgrowth of radicalism the legislature drew the line at puberty, and distinguished betwixt a child, an infant in the law, and a young woman. The first was supposed to have no rights on her person, and consent did not lessen the criminality of connection with her; the latter was credited with the charge of her own person. Now it is proposed to raise the age at which consent goes for nothing to sixteen; from which no end of difficulties will arise. It is no uncommon matter for girls to be married at, or even before, sixteen; and we might see a man who has married a young girl, and gained the church's sanction thereto, had up on a criminal charge for carrying out his marital duties, without which the marriage cannot be consummated. The radical party has determined that man shall be encouraged to be moral by every probability of disease dogging his errors of the flesh. Now female chastity has to be protected by an act which will soon involve another to protect men from charges levied with the intent to extort money.

Indeed, our legislature is drifting towards the utterest excesses of folly in its attempts to foster morality by edicts. But it would seem they must learn their own folly by such acts as will teach them a lesson, the only thing that ever will; and how many lessons they may require it is not possible to say. At the same time the threatened corporations have been busy in their own interests. Consequently, years after I have disappeared from professional life and gone over to the majority, some future correspondent may quote from a recent letter of mine in relation to some proposed medical bill in the next century, just as in it I quoted from the *Lancet* of over a generation ago. We were confidently told that if the Medical Bill did not pass this session it would have no opportunity of being brought forward again this century, in order to terrify any meditated opposition; but the threat has failed in its object, for opposition is alive, active, and likely to be successful.

But if the medical profession either does not know its own mind, or does not possess the influence with our legislators to get its wishes attended to, it has not been without some honor. The annual conversazione of the ancient Medical Society usually comes off in May, but this year it was delayed until the extension and improvement of the Society's premises had been concluded. Sir Joseph Fayrer is the present President. He was in medical charge of the Prince of Wales when His Royal Highness made his recent tour through Hindostan; and the prince, in remembrance thereof, attended the conversazione to do honor to his physician. Of course the announcement of this drew a large attendance, Sir Joseph himself being popular, and deservedly popular, with the profession. Besides the Prince of Wales, Prince Lucien Bonaparte and other illustrious individuals were present. So the Medical Society has nothing to complain of as regards royal attention. Two days afterwards, the Royal College of Physicians held its annual conversazione; and again the medical profession was fluttered as well as flattered by the presence of royalty. This time H. R. H. the Duke of Albany was received and shown round the premises in Pall Mall by the President, Sir William Jenner, K.C.B., and the Censors of the College. Further, three men of title were present, and I suppose the College felt itself on familiar terms with the aristocracy.

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It is usual for the President of the College of Physicians to be made a baronet; but, as Sir William Jenner is that already, it has been decided that an honor shall be conferred on some one else. So it is announced that the honor of knighthood will be conferred on Dr. Pitman, Registrar to the College of Physicians, in recognition of his long and faithful services to that important body.

It is not always clear what constitutes a qualification for knighthood; and the Registrar of the College of Physicians may have quite as strong a claim as the Chief Justice of Fiji, or any other of the persons recently knighted in the shower of such honors which has fallen of late. What his services to the College have been, beyond being a very urbane, gentlemanly, punctual registrar, is only known to a body whose rulers sit *in camera*. What he has done professionally since he was Lecturer on the Practice of Medicine at St. George's Hospital Medical School, or what he may have contributed to medical literature, is unknown to me, and does not appear in the Directory.

A dentist is to be knighted! Mr. Edwin Saunders, F.R.C.S., for many years dentist to the royal family, is to receive this honor. Mr. Saunders has long held a very prominent position in the world of dentistry, and is a worthy recipient of such an honor.

It is unfortunate that in this country there is no purely civil order for distinguished services. A knighthood is now too common as a reward for party political services to carry with it much dignity. Whatever honors are going about, it is well that Medicine have a share, even if it be only among the crumbs which fall from the rich man's table and among the humblest honors. The sister professions, the Church and the Law, come off very differently: the Church has its spiritual peers (a doomed body, it would appear); while the judgeships carry titles usually. But the affairs of the profession are managed in a curious fashion, as the medical press keeps constantly assuring us, while no one professes disbelief! As to the Royal College of Physicians, the said press is in the habit of stating that its actions are inscrutable, and that all hopes of better things must be abandoned. The membership is gained by examination, and is indispensable to holding a respectable hospital appointment; it is the one portal, indeed, through which graduates of universities, or others, non-graduates but ambitious, must enter, and pass on their way to the higher walks of consulting practice. But the Fellowship consists, as a censor once remarked, "in getting eleven of the fifteen voters to look favorably upon your claims." What has to be done to get the good opinion of the said fourteen men is a deep mystery. It is certain a member must *not* canvass; by what occult means, then, these fifteen electors are and have to be reached is unknown to me at least,—as no eleven have ever seen any merit in me. Yet so many men are passed forward to the Fellowship every year; and, though some of them are comparatively unknown to the outside world, it is certain they have merits recognized by eleven out of the fifteen electors inside the council. Hard words have been used about these selections or elections; but self-electing oligarchies are rarely impressed with any opinion but their own. The whole matter has long been a scandal. The hardship of the matter lies in this. The Fellowship is withheld from men who have been guilty of unprofessional conduct; that is a notorious fact. Consequently, when a man has been years a member without being raised to the rank of Fellow, he is open to the suspicion of having been guilty of unprofessional conduct, of which the College thus takes cognizance. Consequently, chief sinners and the merely friendless are mixed together without distinction of persons. Probably no one who has any position of his own cares whether he becomes a Fellow or not. His patients do not ask the question, or care a button. But the lecturers to the College, and, as a rule, its examiners, except in surgery, are chosen from the Fellows. It is always a matter of time for a member to be a Fellow, unless he belong to a teaching hospital. It is easy to see that by this last, and by the matter of examiners, the College rules medical education; and its influence is felt, and unmistakably; but whether it is a happy influence or not, is open to question.

Many suggestions have been made to improve matters. Some have demanded examination; and if this test were adopted there are good grounds for believing that some would soon be Fellows who are not so ranked at present. Another suggestion is that the members should every year elect so many of the most illustrious of themselves to the higher rank. This might be all very well, but the present ruling oligarchy are not in the least likely to abdicate, or hand over their power to any one else. If such change has to be made, it must be done by force, by violence, and the matter is not one ever likely to become a burning question. Many honored names in the past have been without the Fellowship, and it is possible to hope that posterity may have some little respect for men like James Henry Bennett, for instance, who have not succeeded in gaining the good will of eleven out of fifteen voters.

The whole thing is ridiculous, and not far from contemptible; but the open wailings of some members at their exclusion probably induce some of the leading spirits in the council to believe that they wield supreme powers. If these wronged individuals would treat the matter as it deserves, and take no notice of the elections, it would be a great deal better in every way. It would be more dignified as regards themselves; while the littleness that obtains in the secret conclaves would become

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apparent to the persons who, shrouded in secrecy, strive to stab those of whom they do not approve. Do they imagine that any right-minded person would value their approval? Persons whose approval is esteemed are usually persons endowed with self-respect. And because an individual happens to occupy a position where he can manifest malice with impunity, it does not by any means follow that every one has to value his opinion. Yet it would seem that this is the view which obtains in the venerable institution in Pall Mall, who is like an aged female in more respects than this one of antiquity. The matter has been looked at as a scandal far away back for many years, and will go on, doubtless, into the far future.

In a leader for January 18, 1840, the *Lancet* bewails the governing bodies of the medical corporations thus:—"They carry on their proceedings in secret. They expend the money of the members," and so on. At that time Sir James Clarke had declined the offer of the Fellowship. Marshall Hall, as only a licentiate, was grumbling that the College library was closed against him. Professor Grant was not even a licentiate; no more was Sir Robert Carswell. The complaint was then of "self-elective councils," to whom the members are "ciphers, if not aliens." "Talent is idle; industry is vain. The stimulus which stirs generous minds in their career is withheld." But just as the remarks about a medical bill held at that time are re-echoed now, so the expressions used about the College of Physicians then may be repeated now, without any change but the flight of time.

It is not the ten men who might be willing to act straightforwardly upon whom it would be well to let in the light of day: it is the five men who can unite to act otherwise, and who are sheltered by the secret conclave, who need dragging into daylight. That this could be done, if any member felt sufficiently keenly and would take the trouble, is probable enough. But it is equally and even more probable that no one will ever be at the pains to compel the council to make public its deliberations.

It is well enough known in life that persons do not desire to keep their actions in the shade if they will bear daylight; indeed, they are only too proud to parade them and get credit for them. When there is studious concealment with outside discontent, and this goes on for years, the inference that there is something which calls for concealment does not need drawing, it suggests itself! The medical corporations are spoken of with disrespect, and charged with the vilest selfishness; yet years roll past after years and things continue the same. Each new President is regarded as the inauguration of a new *régime*, yet the prospect remains unchanged. The present President is the universally-respected head of our profession, loyally and cheerfully acknowledged as such by all. It was thought great changes would follow his Presidentship; but they seem to be still in the womb of the future.

Some malign influence is in action which is hostile to reform in the medical corporations. They clamored to have the proceedings held *in camera;* and any one with a slight experience of the world knows what that means! It means that for once A can do some real good by venturing to say about B what ought to be said and yet he may not prudently say it openly, twenty times C can malign D, and does it with distinct calculable results, without D having an opportunity of dragging him to light. The necessity for secrecy is, after all, the argument of men who have not the courage of their convictions,—who, if they feel something ought to be done, will only do it when it is not to be inconvenient to themselves. And under this pretext a number of other men shelter themselves in private backbiting, who, if their individual iniquities are not known, as a body their conduct is known. And consequently the profession of medicine labors along under a rule which it despises, knowing that certain men cannot be thrown out of the saddle; while the outer world looks on at it in scorn. Fortunately, a man can do good work, if such work is in him, without recognition by a far from impartial oligarchy; while if the world can find a trustworthy medical man who treats his patients honestly, it does not bother its head as to whether he is honored by his college or not; though of course there are persons, not wholly disinterested perhaps, who would wish the world to note such matters.

If the refusal of the Fellowship of the College of Physicians were a direct tangible injury to any member or members, it would not be long before the matter would be taken up in earnest. But, as it happens, it is only a sentimental grievance, to be grumbled over by those who choose to feel aggrieved. The membership is essential, and, therefore, to be secured by examination; but the Fellowship is only the road to certain honors and emoluments, and, therefore, is a matter of favoritism. If a man is not a favorite, all that he has to do is seek honors and emoluments elsewhere; and it is much better for him to turn his energies in other directions, instead of doing nothing but whining that he is passed over, and thus gratifying the malice of those who wish to put a slight on him.

J. MILNER FOTHERGILL.

CHLORATE OF POTASSIUM IN ULCERATING EPITHELIOMATA.—In fine powder this is said to yield excellent results when dusted over the surface of ulcers and ulcerating epitheliomata. The surface should be cleansed and the powder dusted thickly on twice a day. This, it is claimed, relieves pain and promotes healing.—*Canada Lancet.*

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PROCEEDINGS OF SOCIETIES.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

A CONVERSATIONAL meeting of the Society was held at the hall of the Society on May 16, 1883. Dr. G. W. Vogler read the following:

CLINICAL NOTES OF A CASE OF ECCENTRIC HYPERTROPHY AND DISEASE OF THE VALVES OF THE HEART, THE VISCUS WEIGHING TWENTY-SIX OUNCES.

W. H. P., aged 41, wagon-builder by occupation, of a delicate frame, under five feet in height, and weighing ninety-six and one-half pounds, was admitted to the German Hospital, December 29, 1882. His chief symptoms were severe dry cough, great difficulty in breathing, excessive over-action of the heart, a pinched and pained expression of the countenance, and dropsy of the feet and legs. All the minor symptoms consequent upon extensive organic disease were also present.

Auscultation and percussion of the chest revealed emphysema of the lungs, great increase of the dulness-area over the pericardial region, the apex-impulse below the sixth intercostal space, very tumultuous action of the heart, and a distinct and loud blowing murmur (the most marked I ever listened to) heard over both aortic and mitral valvular region, especially prominent at the former.

These physical signs so prominently characteristic rendered the diagnosis easy. His urine showed a trace of albumen, which soon disappeared, however. Briefly, his history showed him to have led a hard life, having endured great hardships during the late Rebellion, addicted to drinking, and having had frequent attacks of rheumatism. No history of syphilis.

The treatment adopted was simple,—viz., infusion of digitalis, perfect rest, tonics, and the best diet the house afforded.

His improvement was wonderfully rapid, his weight being one hundred and sixteen pounds when he left the hospital, February 26, 1883. He probably must have abused himself badly immediately after his discharge, because, upon application of his friends, he was readmitted on March 13 with his previous symptoms very much exaggerated, and almost in a state of collapse, with delirious mutterings, face anxious and covered with cold sweat, extremities cold, great difficulty in breathing, and, in short, every evidence of rapid cardiac failure.

Cardiac stimulants and other measures proved of no avail, and death occurred seven hours after admission.

Post-mortem examination proved the heart (specimen shown) of great interest pathologically. Its weight is *over twenty-six ounces*, or, putting it in other words, if about nine ounces be allowed as a fair weight for a normal heart in a subject of the height and weight of my patient, it would be almost *three times* the weight of the healthy organ. For evident reasons, these enormous-sized hearts, in which dilatation extends the area and hypertrophy the thickness of the cardiac walls, are well named "bovine hearts."

The specimen shows great thickening and hardening of the aortic valves through atheromatous and calcareous degeneration, and consequently *incompetency* must have been very marked during life, causing both obstruction and regurgitation, and producing the extensive "eccentric" hypertrophy (hypertrophy with dilatation) noticeable in the left ventricle. So marked is this that a normal-sized heart may be placed within its cavity. This hypertrophy is confined alone to the left ventricle, and is uniform throughout. Atheromatous patches and calcareous points are noticed above, upon, and below the aortic valves. The left auriculo-ventricular orifice is much expanded, and owing to the thinness and distention of the mitral valve, together with the increase of size of the papillary muscles and the chordæ tendineæ, its usefulness was greatly impaired, thereby allowing regurgitation and accounting chiefly for the enormous dilatation of the left auricle. The right side of the heart shows extensive dilatation. The thinness of the walls of the auricles is worthy of notice. The cavities of the left and right ventricles and of the right auricle are laid open. The walls of the left auricle I have left intact, to better give an idea of its size or dimensions by introducing the finger within its cavity through the abnormally large auriculo-ventricular aperture.

The specimen beautifully shows the minute anatomy of the heart and the relations of the parts one to the other. The musculi papillares and the slender chordæ tendineæ, which greatly aid in controlling the mitral valve, are very conspicuous. This is also the case with the columnæ carneæ and the auricular appendage and its musculi pectinati.

I believe the largest heart on record is mentioned by Dr. Bristowe* in his "Pathological Transactions," in a case of aortic valvular incompetency, with probably regurgitation through the left auriculo-ventricular aperture from maladjustment of the valves. This specimen weighed forty-six and one-half ounces avoirdupois, though the subject of the disease was only twenty-one years of age.

Dr. Thomas B. Peacock, of Edinburgh, in an elaborate article upon the "Weight and Size of the Heart," in Reynolds's "System of Medicine," gives the mean weight of the healthy heart in males between forty and fifty years at nine ounces eleven drachms, or,

* Reynolds's System of Medicine, p. 368.

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more generally speaking, estimates the *average weight* in males at *nine ounces eight drachms*. The same writer says, "In cases of obstructive aortic valvular disease I have weighed hearts ranging from fourteen ounces to twenty-one ounces in males. In cases of *aortic valvular incompetency* I have found the heart to weigh from fourteen to thirty-four ounces in males. . . . In the case of incompetency of the aortic valves it is often impossible to say how much of the great enlargement of the heart is due to the obstruction and how much to the incompetency of the valves, for the latter condition is generally only the final stage of the former." Farther on he says, "*In combined aortic and mitral valvular disease* the weight of the heart is intermediate between that which obtains in the two separate forms of disease, the organ being lighter than in aortic, heavier than in mitral, disease. In males, in cases of this kind, the heart was found to weigh fourteen ounces eight drachms to twenty-one ounces eight drachms."

DISCUSSION ON THE KERATOSCOPE.

Dr. Heyl thought that the instrument cannot be sufficiently accurate to be of practical value. It must give only a very gross idea of the corneal surface. It may, however, answer for class-demonstration. Helmholtz's ophthalmometer is applied with every precaution for exactness, the head is firmly fixed, and the apparatus arranged with the greatest precision. In the present instrument nothing of the kind is done, and incorrect observations would probably result. Practical experience with the instrument may show a more favorable opinion, however. As regards the determination of intraocular tension, we must confess that the subject is but little understood. It was a question with him whether abnormal tension over the sclera necessarily involved a corresponding change over the cornea. He referred in this connection to a case of glaucoma in which the tension over the cornea seemed to be diminished at the same time that the scleral tension was increased, and also to a case of conical cornea in which normal scleral tension was coincident with diminished corneal tension.

Dr. Landesberg said that the instrument is not offered in comparison with the ophthalmometer of Helmholtz, by which we can measure mathematically the degree of astigmatism, but which cannot be used in general practice, as it requires extended preparation and a great loss of time for observation in a single case. The keratoscope shown to-night can, however, be used very satisfactorily in general practice, and is sufficiently accurate for ordinary practical purposes. He recently had a case in which no disturbance of equilibrium of the ocular muscles could be detected by the usual method of examination, but there were double images, standing above each other, and the keratoscope showed that the left eye was deviated somewhat downwards. He does not use the instrument to measure astigmatism, but only to detect it by a preliminary examination. The instrument is easy to manage, and can be used to demonstrate as well as for actual observation. In some cases of regular astigmatism the rings appear as if they were drawn on a concave surface.

In determining intraocular tension the instrument is an aid, but is not offered as perfect test. The method of examining the tension of the eyeball by pressing the fingers directly on it is not a new method, but is the best, and was used long ago by Coccius. It is preferable to the method of making alternate pressure upon the eyeball through the closed lid, as its resistance may deceive the physician. This method should always be used. We have only to direct the patient to look upwards, and to warm our fingers before applying them on the globe.

A CONVERSATIONAL meeting of the Society was held at the hall of the Society on May 23, 1883. Dr. Charles W. Dulles read a paper entitled "Remarks on Hydrophobia" (see page 785).

DISCUSSION ON HYDROPHOBIA.

Dr. H. C. Wood, opening the discussion by request of the Chair, said: I consider the paper an extremely able production, but cannot agree with the conclusions at which the author arrives. Though much nonsense has been spoken and written about this subject, and almost every ridiculous theory has been advocated, yet we cannot reject the inference from certain facts which are well known. A disease undoubtedly exists among the *carnivora*, and especially among canines, which is propagated by biting, and attended with decided nervous manifestations and disturbance of the salivary apparatus. This disease has been passed from one animal to another hundreds of times by biting and by injection of saliva. Such results cannot be ascribed to the influence of fright, as they occur in lower animals which are incapable of continuous fright and of disease-simulation. In physiological laboratories animals are subjected to an endless variety of injuries, but no one has ever seen hydrophobia arise from these causes; but when we take a small amount of saliva from a rabid animal and inject it into a healthy one we have the specific disease developed in about sixty-six per cent. of the cases. When the virulent saliva is introduced into human beings by the bite of a rabid animal, we have a series of symptoms of analogous character. It must surely be regarded as very remarkable that out of say one thousand persons dying with hydrophobic symptoms a much larger proportion than nine-tenths are

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OLEATES.

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Although the advantages to be derived from the combination of bases with oleic nized as early as 1872, the use of these compounds has not become general, and prin defects in the pharmaceutical preparation, the original crude method of their prep been improved upon. Within the past year Dr. J. V. Shoemaker, of Philadelphia, ha of the oleates one of especial study and experiment, both from a pharmaceutical an point. The result has been the production of a number of very eligible compounds, of therapeutic properties hitherto unrecognized. We have secured from Dr. Shoem tion touching his methods, and are now prepared to furnish oleates of the following m been found of great value in the affections indicated.

ALUMINIUM.—A valuable astringent, serviceable in eczema, and as a dressing for burns.

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QUININE (25 per cent. of the alkaloid).
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These contain the several metals mentioned above. They are much more clean ordinarily prepared, and for all the properties of ointments are much to be preferr Circulars fully descriptive of the above, and such other information touching tates as has appeared, will be furnished gratis on application.

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In answer to frequent calls, another preparation is now offered,

BOUDAULT'S SACCHARATED PEPSINE,

having the same high digestive power as the amylaceous; it will be sent only when specified.

Boudault's Pepsine is sold in bottles of 1 ounce, with a measure containing exactly 5 grains; also in bottles of 4, 8, and 16 ounces for dispensing.

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"The experiments made in the hospitals of Paris have demonstrated that *Dr. Rabuteau's Dragees, Elixir, and Syrup* regenerate the red globules of the blood with a rapidity never observed with the use of the other ferruginous preparations. These results have been proved by the various *Compt-Globules*.

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FOR THE TREATMENT OF TAPE-WORM (TÆNIA SOLIUM).

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A COMBINATION UNITING THE PROPERTIES OF

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This preparation, which has been used with great success in the hospitals of Paris since 1868, is adapted to the treatment of all diseases requiring the administration, in a small volume, of a tonic able to stimulate and support the vital forces, as *Pulmonary Phthisis, Depression and Nervous Debility, Adynamia, Malarious Cachexia, etc.*

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found on investigation to have been previously bitten by dogs. Very few cases are known in which hydrophobic attacks have followed the bite of a dog not mad.

The pathology of the disease is involved in doubt. The lesions that have been detected in the brain are rather the effect than the cause of the phenomena. We would naturally expect that such violent action would give rise to the alterations which have been observed with the microscope.

The question as to the long incubation does not affect the main point as to the existence of the disease. Mistakes may have been made in some of the cases where very long incubation has been supposed and infection more recent may have been overlooked. We must remember that a lick or a very slight scratch may be the means of communicating the disease. In the case reported by me lately, no instance of a bite more recent than three and a half years could be found.

A striking case, almost positive proof of the correctness of the accepted views on hydrophobia, is detailed by Dr. Colin,—a case which was discussed before the French Academy and received the credence of Bouillaud. In 1865 a French soldier in Algiers was bitten by a rabid dog, and a comrade who rushed to his assistance was also bitten. Both wounds were cauterized by the hot iron. The first soldier died in a few days; the second experienced at the time no serious effects, but after an interval of five years died of acute hydrophobia. The case was officially reported on to the French government, because if it could be established that the death was due to the bite received in the attempt to rescue a comrade, the widow would be entitled to a pension. The most careful search failed to show any possibility of infection other than the one alluded to; and the case therefore remains as one of long incubation, though it is true that objection might be made that some unnoticed or forgotten introduction of virus had occurred more recently. It is not possible to explain why the virus remained so long inactive.

One of the great difficulties in the way of a thorough knowledge of rabies is the danger of investigating it. Even Dr. S. Weir Mitchell, although accustomed to play with rattlesnakes, had declined to undertake experiments on hydrophobia. Youatt is supposed to have committed suicide because he felt the beginning of the symptom of the disease after having repeatedly escaped from the effects of bites from rabid dogs.

Dr. Mills: I think Dr. Dulles has very well set forth the arguments in favor of the view that in man at least hydrophobia as the result of a specific infecting virus does not exist. One of the best demonstrations of this is the fact that a distinguished investigator was able in thirty years to obtain only three cases which could be considered hydrophobia. Of course the results of experiments on inoculation might be regarded as favorable to the theory of specificity; but it has been shown that hydrophobic symptoms may be produced in animals by the inoculation of the saliva of non-rabid animals. It is, however, the existence of hydrophobia in the human species that is most doubtful. In nineteen out of every twenty cases the disease is probably not hydrophobia at all, and in many instances, certainly in every Philadelphia case which I have seen or of which I have knowledge, the bite supposed to have caused the disease was by a dog not rabid. Every symptom in so-called hydrophobia is capable of being produced by other diseases,—*e.g.*, localized meningitis, tubercular tumors, tetanus, reflex epilepsy, acute mania. A case has very recently come under my notice in which from injury to the finger with a piece of brick tetanoid symptoms were developed, with well-marked sputtering of saliva, which is considered so typical a symptom of hydrophobia. In one case, which I saw in association with Dr. Burns and Dr. Wood, the autopsy revealed distinct pachymeningitis; and in another case chronic brain-lesions were found which were sufficient to account for the symptoms. The high percentage (eighty to ninety per cent.) of instances in which persons are bitten by rabid dogs and yet do not go mad is another point of importance. Even experimental inoculation succeeds in only about one-fourth the cases. As regards the influence of fear, I may mention the cases of two ladies, both patients of mine, who cannot endure the sight of a dog, and who are thrown into great excitement at the mere mention of the animal. In another case, a patient actually barked like a dog, spat, sputtered, and had clonic spasms, symptoms which wholly ceased on threatening to use the actual cautery.

That cauterization applied to recent bites has apparently been efficacious in preventing infection is no argument; for the same applications have been of great effect in epilepsy.

The long period of incubation is a serious difficulty. If we take vaccine virus as a typical virus, we can get an idea of how extraordinary the supposed long incubation of hydrophobia is. Vaccine loses its power within a few months at most. It seems very difficult to suppose that the virus of hydrophobia can remain for years locked up in the system and then suddenly break out with violence. The case of the soldier alluded to by Dr. Wood is not absolute proof of long incubation. Other infection is possible,—syphilis, for instance; and no proof is adduced that the dog which did the biting was mad.

Dr. Moon: The paper presented this evening is as gratifying as the remarks of Dr. Wood on "The Pathology of Hydrophobia" a few weeks ago were unsatisfactory,—this being a fair and creditable presentation of the subject, while Dr. Wood might have been describing a typical case of acute mania as

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not infrequently seen. The pathological specimens exhibited could very readily be ascribed to a diseased condition of the brain which would induce mania.

There is already in the public mind too much misapprehension on this subject, which should not be encouraged by physicians.

Dr. Dercum: The virus-theory may be unsatisfactory, but it is the best. It is very difficult to see how mere reflex from afferent nerves could produce the symptoms observed in hydrophobia in dogs, especially the melancholia. Another fact in favor of the specificity of the poison is the frequent success in inoculation. Some dogs have been inoculated only after several trials; but these failures are dependent on differences in the susceptibility of the animals. The period of incubation is, it is true, very variable and often long; but then the periods of incubation of all diseases are subject to much variation.

Dr. William R. D. Blackwood: That there is such a disease in dogs I believe from experience, but as to its occurrence in the human species I do not know personally, although I do not believe that the thousands of physicians who have treated and described the disease before our time were all fools, or that the hundreds of people who have died from rabies were all victims of their imagination; neither do I believe that the most ardent admirer of the fright and imagination theory would deliberately allow a mad dog to bite him, and then depend upon his superior wisdom and lack of imagination to avert the possible and probable development of hydrophobia. In 1868 a rabid dog entered the camp where I was stationed, and, after snapping at various other dogs, he bit—*first*, a small lap-dog, *second*, a woman, and *third*, another small dog. The mad dog was then killed. The woman had two wounds, which completely penetrated the webbed portion between the thumb and index-finger of her left hand, and I at once cauterized the punctures by pouring nitric acid into them, *the acid passing freely through each* and dropping from the under side of them. The two bitten dogs were cooped up, and *both died* from hydrophobia; but the woman remained well when I last heard from her, ten years afterwards. The peripheral irritation from the severe bite or the severer nitric acid did not develop hydrophobia, yet there must have been virus present; for the animals bitten *before* and *after* her wounding died from rabies.

I also believe the disease to originate spontaneously in dogs. Some time after the occurrence mentioned above, a small cur-dog became offensive through biting strangers and visitors to the post, although he did not ordinarily bite those belonging to it. The dog was tied up securely for a time, and I believe he had abundance of water and proper food. He did not, however, have sexual intercourse, which may or may not have had anything to do with his case. This dog went mad; and I caused him to bite another animal for experiment. Both animals died. No rabid animals had visited camp since the time when the woman was bitten, and the dog now referred to was not then born: hence the inference plainly is that this case of rabies arose spontaneously.

I cannot see any difficulty about the virus lying long dormant in the system before breaking out. Syphilis, apparently eradicated, will show itself many years afterwards without a second inoculation. Diseases of all kinds require longer or shorter periods of development after exposure to them in different persons.

Dr. O'Hara: I do not think that syphilis is fairly comparable to hydrophobia, for the former is transmissible directly from one human being to another, but the latter is not. Possibly but little confidence can be placed in the decisions made from the superficial examinations of pension surgeons, and therefore the case of the French soldier which Dr. Wood had mentioned is not unobjectionable. Dr. Agnew and I saw a case which presented the typical symptoms of hydrophobia: Dr. Agnew considered it a brain-tumor, but the autopsy did not reveal any gross lesion. Many physicians would have put it down as hydrophobia, unacquainted with the previous history. The clinical symptoms of hydrophobia were very marked at one time, but the case closed with the symptoms of *acute paralytic dementia*. Hydrophobic symptoms are not very uncommon in many brain-diseases.

Dr. Bartholow: The disease hydrophobia admits of a large latitude of opinion, as has been well shown by Dr. Dulles's paper. Two groups of cases are presented. In one group imagination or morbid fear is the causative influence. All the objective symptoms of hydrophobia may be produced in this way. Persons who have been bitten by dogs brood and worry over the matter, closely study every symptom as seen in cases, until they develop a condition of the most serious character. The influence of the mind over the body under such circumstances is well illustrated by a case recorded in Tuke's work on the Influence of the Mind over the Body. Two brothers were bitten by the same dog, and shortly after this event they separated, one going to Belgium, the other remaining in France. The one in France was a few days after seized with hydrophobia, and died. The other, after a long absence, returned to France, learned for the first time of the manner of his brother's death, was shortly seized with hydrophobia, and died. Numerous cases have been recorded, in both sexes, having all the objective phenomena of hydrophobia, produced merely by mental causes, by fear, and by mimicry or morbid irritation. These constitute a distinct group. We have thus a neurosis having all the ordinary characteristics of hydro-

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phobia. I am a firm believer, also, in the existence of a morbid entity, to which we apply the term hydrophobia, which is propagated by a distinct virus that is inoculable. We have knowledge of the fact that the saliva and other secretions may become toxic. Montgomery records a case in which an infant was poisoned by nursing at the breast of the mother while she was in a very high passion. Sternberg has shown that human saliva may become poisonous; and authentic instances are known of the communication of hydrophobia from man to man by bites given in states of tremendous passion. The recent discoveries in regard to the ptomaïnes, alkaloidal poisons produced during the decay of animal tissue, will throw some light on this subject. In the case referred to by Dr. Blackwood we have evidence of how close confinement and deprivation of customary indulgences can unfavorably affect an animal; and in the same manner a dog chased or annoyed in the street may be so affected that its saliva will become dangerous.

As regards the length of the period of incubation, we must remember that this period varies in all diseases. If the period of incubation is two weeks,—which is not unusual,—why not two months, or two years?

Dr. Hamilton: I recall the following case, which may be interesting in this connection. A man had fallen against a rail and hurt his shin severely, but continued at work for two or three days. The wound inflamed and suppurated, and then tetanoid symptoms set in. To these hydrophobic symptoms supervened, shuddering, and going into spasms whenever an effort was made to drink water. This condition continued about thirty hours, when death ensued. The patient had never been bitten by a dog.

Dr. Wittig: About forty years ago I saw a case in which a young man who had been sleeping with a dog found his mouth covered with foam, and foam on the mouth of the dog also. The young man was very much alarmed when I saw him, but he recovered under the use of calomel and diaphoretics associated with a remedy that is used in Russian practice,—the genista. I was told that vesicles had appeared under the tongue and had been cauterized. In another case, a young man was bitten in the finger, caustic was applied, but the patient got very much frightened and sent for me. I used remedies similar to those in the case just mentioned, and the patient got well. Dr. Heger, of Vienna, has said that in his opinion the saliva is not the cause of the disease, but it is a lesion of a nerve causing peripheral irritation. I incline, however, to the opinion that it is a virus, and that it may become latent and lie dormant for some time in the system.

Dr. W. S. Stewart: In Westmoreland County, in this State, lives a family of physicians who claim to have a remedy for hydrophobia, and people come to them from all points for treatment. In one case, a patient of my preceptor's, feeling symptoms of an alarming kind, went to one of these doctors, and received from him one pill, to be taken on arriving home. This pill on being opened was found to be made of bread-crumbs and to contain a piece of paper bearing the word *abracadabra*. This pill, taken with restriction as to stimulants and excitement of all kinds, constituted the treatment, whether the cases were real or imaginary.

Dr. Dulles, in closing the discussion, said: I will endeavor to reply to some of the points raised, in the order in which they came up; for time will not permit a systematic reply.

In the first place, I must call attention to the vagueness of some of the statements of Dr. Wood. His figures in regard to successful artificial inoculations are not to be accepted without question. If his statement that sixty-six per cent. of experimental inoculations of rabies are successful is true of the Laboratory of the University of Pennsylvania, then the success there is about four times as great as has been attained elsewhere. In the famous experiments of Hertwig, of Berlin, to which reference is always made in this connection, only about one-quarter were followed by what are called "positive results," and some of these were duplicated experiments on the same animal. Again, the statement that ninety-nine per cent. of cases of hydrophobia can be traced to the bite of a mad dog is also incorrect, even if one puts faith in testimony drawn out, as it often is, after suspicious symptoms arise. It is often the purest assumption to say that the dog that gave the bite was rabid. It is a necessary part of the inoculation theory, but it is not supported by good proof. A very common history of such cases is that a strange dog ran up, snapped at the person, and then ran away and was lost, nothing being known about it before or afterwards.

The story credited to M. Colin is very interesting, but it has been exploded. M. Colin himself told it, with reserve, to the French Academy of Medicine; and it fell to pieces under the criticisms of that distinguished body. It gives no support to the theory of long incubations, but demonstrates the credulity of those who accepted it.

In reference to Mr. Youatt's views, it must be remembered that although Youatt is worthy of much respect as a veterinarian, yet he is not much of an authority in regard to the diseases of men. In regard to hydrophobia he held some peculiar views. For example, he believed in the preservative influence of delayed cauterization, and claimed that he had saved the lives of four hundred persons bitten by rabid dogs by cauterizing their wounds with nitrate of silver. He was altogether too credulous. Indeed, too much reliance has been

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placed upon the statements of the English veterinarians. Mr. Fleming, who is often quoted as an authority, and who wrote a book on this subject, recently acknowledged that he had seen in all his life only one case of hydrophobia, and that was not under his own care.

Dr. Blackwood, in his remarks, mentions an experience of his own in which a dog, being kept in restraint and being deprived of sexual indulgence, developed spontaneous rabies. Now, the testimony of the most reliable veterinarians is almost universally against the possibility of rabies arising in this way. Though I had not time to tell stories illustrative of the points dwelt upon in my paper, I will give one in this connection. M. Bouley, having long denied that there was any really trustworthy evidence of a spontaneous rabies, told the French Academy of Medicine, about twenty years ago, how he had recently thought he was mistaken. He had a bitch brought to him at Alfort by her owner, who said she was so valuable for breeding-purposes that she was never out of his sight. The last time she was in heat he refused her the male, and in consequence rabies developed. M. Bouley showed the animal to his students, and confessed that with such positive evidence this must be regarded as a case of spontaneous rabies. In three days the bitch died, and at the autopsy "what did we find," said M. Bouley, "in this beast whose heat had not been satisfied, according to the positive assertion of her master? Four young ones in her belly. Behold how they write the history —of bitches!"

The story of the peasant of Languedoc, related by Dr. Bartholow, is a very familiar and oft-repeated one in the literature of hydrophobia. It varies a little in different accounts. The place to which the second brother is said to have travelled is not always the same. But the most constant thing about it is that it is used in a way diametrically opposite to that in which Dr. Bartholow has used it this evening. It is generally cited as an illustration of the effect of the imagination, and not considered a very valuable argument in favor of long incubations. The statement that Dr. Sternberg has found human saliva to be poisonous "under *peculiar* circumstances" is not correct. The fact is that Dr. Sternberg has been but one of several experimenters who have demonstrated that inoculation of certain of the lower animals with human saliva proves poisonous under *almost* all circumstances. Again, Dr. Bartholow spoke of cases of communication of hydrophobia from man to man as "well authenticated." After investigating the subject for fifteen months, I must say that I have not found a single case of this kind which deserves, or gets, serious consideration. Nor is there any scientific proof that rabies can be excited by deprivation of sexual gratification. Some very cruel experiments have been performed in France with the object of ascertaining whether or not hardships, solitary confinement, and the deprivation of food, of water, and of sexual indulgence would cause the development of rabies, and the result has been always negative.

It has been said by Dr. Bartholow, in answer to objections raised against the credibility of very long periods of incubation, that these vary in different diseases, being longer in some and shorter in others; and that "if there may be an incubation of two weeks, why not of two months or two years?" This is a dangerous style of argument. One might as reasonably say, "Men vary in height, and if a man's height may be six feet, why not sixty feet?" The periods of incubation in diseases that are fairly understood are always reasonable. A period of incubation is not a period of total inactivity, but simply the time required for a chemical poison to make its way through the system, or for a vital poison to multiply until it is capable of producing certain gross manifestations. Consistently with this fact, the longest periods of incubation which are well established are found to be measured by days or weeks,—never by months or years. For incubations that exceed reasonable limits syphilis is sometimes cited. This has been done to-night. We are not here to discuss syphilis, or it might be interesting to consider the value of some of the assertions made in regard to it. But I call attention to the faulty method of arguing which this appeal to syphilis illustrates. One hypothesis is made to rest upon something else, which itself is nothing but an hypothesis. Unfortunately, many of the arguments in support of the commonly-accepted theory of hydrophobia are of this sort, and but little of the evidence upon which it rests can be regarded as having *an accuracy and a reliability commensurate with the delicateness and gravity of the questions at issue.*"

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, JUNE 28.

The President, Dr. TYSON, in the chair.

A specimen of renal calculus—Oxalate of lime.

By J. H. MUSSER, M.D.

A. R., æt. 32, a stone-cutter, residing one year in Philadelphia, applied to me for treatment on June 5, bringing with him a sample of his urine. It was bloody, and he had been passing it without pain during the twenty-four hours prior to this visit. Three months ago, without any cause, he was seized with pain in the left loin. The pain increased in severity, kept him from work, caused faintness, but no nausea or vomiting; it did not radiate in any direction, save transversely to a slight extent, lasted three days, and was not followed by hemorrhage. In the intervening

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three months he was in good health. A jar of the body or any movement did not increase the pain. It may be noted, but is rather irrelevant, that for ten or more years he has always had a weak back, becoming painful when stooping.

Twelve hours after the consultation this same localized pain recurred, and continued for twenty-four hours. Suddenly it was relieved, and the subsequent urinary discharges were clear. In three days he had a return of the pain and hemorrhage simultaneously. The pain increased in severity, and at the height of the paroxysm it extended to the testis and to the head of the penis. The paroxysm was relieved by the passage of the calculus I show you, by the urethra. The passage of the stone through the ureter was characterized by the most agonizing pain and frequent attempts to urinate. First sample of microscopical examination of the urine showed the red color due to blood. A similar examination of his clear urine, as well as the bloody, proved the presence of urate of soda and crystals of the phosphates. The urine was acid. The diagnosis of renal calculus was not difficult, but the microscopical appearances of the urine led me to infer that the stone was composed of uric acid. With such idea the patient was put on alkaline treatment. The sequelæ proved that the saline effect of such treatment was of no avail, save from the diuretic action of the drugs. Morphia was given to relieve pain.

A portion only of the stone was received, an angular portion having been broken off by the patient. The portion weighs .06 grain. The exterior is tuberculated; the interior dark in color, bluish, the exterior lamina light-brown. It is exceedingly hard. Chemical examination was made by Dr. Leffmann, who reported it to be an oxalate of lime calculus.

Hæmatoma in the upper portion of the mediastinum producing death by suffocation. Presented by J. T. ESKRIDGE, M.D.

Dr. Eskridge said that he obtained the specimen from a colored man, porter, aged 32 years. He had led an irregular life, but it was not positive that he had ever contracted syphilis. During the past winter he suffered from a severe cold on the chest, and was told by his physician that his heart was inflamed. With the exception of slight cough, unattended by any difficulty in breathing, he had considered himself in excellent health on June 10, 1883, when, after carrying a heavy trunk on his shoulder from the first to the fourth floor of a hotel at Cape May, he was seized immediately with great difficulty in breathing, and was compelled to seek the open window to prevent suffocation. During the next two days, while still remaining at the sea-shore, he suffered from several attacks of shortness of breath, each lasting from several minutes to an hour or more.

He was admitted to the hospital of the Jefferson Medical College on June 12, about sixty hours after the occurrence of the accident. On admission his breathing was so labored that he was unable to speak. He was gasping for breath, and bathed in profuse cold perspiration. Respiration 36, with greatly prolonged expiration; pulse, 100; temperature, 99.7°. Inhalations of amyl nitrite and the hypodermic use of morphia and brandy seemed to give relief. The attack lasted about twenty-five minutes. He slept well during the night, and was tolerably comfortable until five P.M. the next day, when he had another paroxysm, which was promptly checked by amyl nitrite, morphia, and dry cups to the chest.

14th, A.M., Dr. Eskridge saw him for the first time. The patient was breathing quietly, and said that he felt comfortable. Pulse and temperature were nearly normal; urine contained neither albumen nor sugar. No cardiac murmur was detected. Lungs were hypo-resonant at their apices. Loud, moist, bronchial râles were present throughout both lungs. In view of the man's former freedom from attacks of dyspnœa, he thought that he detected nothing capable of giving rise to so great interference with respiration. The next two days no dyspnœic attacks occurred, and he seemed to be doing well.

17th. His breathing was distressing for several hours. Nothing seemed to afford much relief.

18th. Severe asthmatic breathing came on at six A.M., and lasted in its worst form about six hours. Chloral hydrate gave some relief. After that paroxysm his breathing did not again become quiet. He died exhausted at seven P.M. the next day. With the exception of occasional headache, he did not complain of pain at at any time.

Sectio cadaveris made by Dr. Parrott, the medical resident.

Thorax.—Pericardial sac was completely obliterated by old firm adhesions between the pericardium and heart. The heart was rather soft, and both ventricles were relaxed and contained considerable dark fluid blood. Valves nearly normal. Both pleuræ were adherent to the upper portion of the pericardium, and the left pleura was everywhere adherent to the lung. Both lungs were emphysematous at their apices, and considerable lobular emphysema existed. Bronchial tubes were congested, and contained considerable mucus.

A semi-solid, or rather soft, oblong body, about two inches long by one and a half wide, was found lying upon the lower anterior surface of the trachea, embedded in connective tissue and firmly held by old adhesions. It occupied a position just above and behind the transverse portion of the arch of the thoracic aorta. Three of the rings of the trachea in the position where greatest pressure was

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exerted by the semi-solid mass presented a dark color, and one of the spaces between the discolored tracheal rings was nearly ulcerated through from the effects of pressure. On cutting into the tumor it was found to consist of blood more or less clotted. The calibre of the trachea was greatly lessened at the seat of hemorrhage. No ruptured blood-vessels were found. No disease was observed in any of the arteries. The abdominal organs were nearly healthy in appearance.

Commenting on the case, Dr. Eskridge said that numerous cases of rupture of the aorta, or of smaller blood-vessels, into the trachea, bronchi, œsophagus, or mediastinum were on record, but in all of them, so far as his knowledge went, death resulted directly from loss of blood. The peculiarity of the case of which he had given a description was the formation of a hæmatoma in the mediastinum. In hemorrhages into that space the blood usually gravitated to the lower portion of the chest, and the patient soon died from loss of blood. In the case he presented, however, on account of extensive, old, and firm adhesions of pleuræ, pericardium, connective tissue, and everything else in the upper portion of the mediastinum, a hemorrhage in that situation must necessarily have been circumscribed, and could have taken place only gradually by dissecting up the adhesions. He thought that the condition of the parts that prevented an extensive hemorrhage predisposed the smaller blood-vessels, especially the veins, of that locality to rupture. In view of the extensive alterations by means of general adhesions that had taken place at the seat of hemorrhage, it was not surprising that rupture of a blood-vessel should have occurred when the parts in the anterior region of the neck and upper portion of the chest were suddenly put upon the stretch, as occurred in the act of raising a heavy trunk from the floor and placing it upon the shoulder. From the specimen, as he obtained it, he was unable to say whether the hemorrhage had occurred from a rupture of the aorta or one of the smaller vessels, or from the bursting of a very small vessel that had become aneurismal. The tearing across of small veins would have been sufficient to give rise to the extravasated blood.

Fatty congenital tumor beneath occipito-frontal muscle. Presented by Dr. NANCREDE.

The tumor was simply presented on account of the rarity of such growths of *fœtal origin*. The patient was a child aged 16 months. The growth was noticed at three weeks, and in consequence must have been of fœtal origin, as it then was of the size of a bean. It presented none of the symptoms of a fatty tumor, except a faint lobulation, the skin moving freely over it, and presenting none of the dimpling so common in lipomata. Its site was peculiar for a dermoid cyst,—viz., over the right occipito-parietal region,—yet its resemblance was so close that by exclusion it was considered to be a congenital cyst. Upon removal it was seen to be beneath the aponeurosis of the occipito-frontal muscle. Microscopic sections, kindly made with the freezing microtome by Dr. W. G. MacConnell, showed that the growth was a pure lipoma.

Adenomatous growth apparently recurrent, in reality an outlying portion of the mamma not removed at a previous operation. Presented by Dr. NANCREDE.

The above title really gives the essential points in the history of a patient, aged 23 years, upon whom two operations had been performed for a supposed fibroma (adeno-fibroma ?) of the breast, which recurring after partial removal of the breast, the whole organ it was supposed had been then removed by another surgeon. Dr. Nancrede had opposed all operation at first, considering the breast was really not the seat of anything beyond a local induration after injury. He had removed the third growth, which from its history and microscopic appearances he was satisfied was the result of the irritating drag of the badly-placed cicatrix on a small portion of breast-tissue left at the second operation. The clinical lesson taught by this case was clear,—viz., the freest possible removal of mammary growths.

GLEANINGS FROM EXCHANGES.

NON-TRAUMATIC PERIPHERAL NEURITIS.—During recent times perhaps the most promising and interesting paths of neural pathology have been those relating to the influence of the nervous system in the production of nutritive lesions of almost every tissue of the organism. This is brought out not only in the large number of recorded instances of such affections, but also in the remarkable speculations which have been adduced to explain their occurrence. In choosing a site wherein to locate the essential or proximate cause of such lesions, none seem so inviting on physiological, almost instinctive, grounds as the central ganglia of nerve-cells. Charcot selected the large cells of the anterior cornua as the seat of the lesion which presided over the affection of bones and joints associated with the phenomena of locomotor ataxy. Buzzard speculated on the existence of a "centre" in the floor of the fourth ventricle which governed the tissue-changes of joints, and pointed to the frequent association of gastric crises with arthropathies as supporting such an hypothesis. Bärensprung, Charcot, and others have regarded the ganglia on the posterior root as operative in the causation of herpes zoster or shingles, and certainly with greater probability of truth

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as compared with the previously-mentioned conjectures. It will be remembered that Jonathan Hutchinson has suggested that some cases of trophic lesion may be due to a morbid state of the peripheral vaso-motor nerves. In a series of articles now appearing in the *Archives de Neurologie*, MM. Pitres and Vaillard are contributing papers with the object of establishing the importance of peripheral nerves in the origination of the various nutritive lesions. The present number of the *Archives* contains an account of two cases which are given in support of their views. The first instance happened in a patient the subject of leucocythæmia. Towards the close of life an area of anæsthesia, which was nevertheless the seat of much pain, appeared on the chin, lower lip, gums, and a part of the buccal mucous membrane, followed by ulceration of the lower lip. At the autopsy an examination, directed only to those parts of the inferior dental nerves after their emergence from the dental foramina, showed that there were no healthy fibres; the myelin sheath was segmented into droplets and granules, the nerve-tubes were partially atrophied and deformed with varicosities, some fibres were so much changed that their interior contained nothing more than yellowish granulations strewn with nuclei. We do not think it justifiable to draw any inference from this case; the insufficient examination of the nervous tissues apart from those mentioned, and the possibility that the alterations of the nerves discovered were secondary to changes, not necessarily ulcerative, of the tissues involved, are, we think, considerations of much weight. The second observation was made in a case of progressive locomotor ataxy, with chronic œdema of the left lower limb and arthropathy of the left knee-joint; the post-mortem examination revealed typical sclerosis of the whole of the posterior columns of the spinal cord, with changes in the peripheral branches of the left sciatic nerve. It may not be unimportant to mention that the right sciatic nerve, although apparently examined by the same mode of preparation, revealed no morbid signs. Many fibres of the left sciatic nerve exhibited degenerative changes like those which have been named Wallerian, after the great experimenter on nerve-degenerations; the posterior articular nerve to the left knee-joint, as well as the muscular nerves, presented similar lesions. The coexistence of the arthropathy with the degeneration of the nerve is certainly important; but, as with other examples of even constant association, the interpretation is by no means easy. M. Déjerine has recently described degenerative lesions of the sensory nerves of the skin supplying a patch of anæsthesia in an ataxic patient. Atrophy of the optic nerve is familiar in tabes dorsalis; although associated, it is probably not continuous in structure with the sclerosis of the spinal cord. In connection with these considerations the frequent occurrence of transient nervous symptoms, usually ascribed to a flying neuritis, in the earlier periods of tabes dorsalis is noteworthy. —*Lancet.*

THE INFLUENCE OF CALOMEL ON DIGESTION.—Dr. Vassilieff (*Zeitschrift für Physiolog. Chemie*) has found, from experiment, that the presence of calomel, at least up to the amount of five grammes, in the alimentary canal, does not interfere with the gastric juice, nor affect the triple influence of the pancreatic fluid on albumen, fat, and starch; on mixing the latter fluid with fibrin and calomel, the formation of certain products, indol, etc., always appearing as a result of prolonged digestion under normal circumstances, is prevented. The gases generated in the process of pancreatic digestion contain none of the usual products of fermentation and decomposition when calomel is present; sulphuretted hydrogen and pure hydrogen are absent; carbonic acid is diminished to from two to ten per cent., whilst under natural circumstances from fourteen to fifty-four per cent. is found in the gases evolved by the action of the pancreatic fluid. In fact, calomel prevents all other changes in nutritious substances save those produced entirely by the digestive secretions, decomposition and retrogressive processes in albumens being entirely checked. Calomel also prevents butyric acid fermentation, as Vassilieff found by experiments on cheese. The action of calomel readily explains the cause of the green color of fæces passed by patients to whom that drug has been administered. Hoppe-Seyler rightly attributed this coloration to the presence of unaltered bile. Now, under normal conditions, bilirubin and biliverdin are changed, by a process of decomposition, into hydrobilirubin, and thus become no longer recognizable in the excretion; but this process is arrested by calomel, and the coloring agents, unaltered, give the fæces their peculiar bright-green hue.—*British Medical Journal.*

STRANGULATED OBTURATOR HERNIA RELIEVED BY OPERATION.—Dr. Hasselwander, of Hausheim, Bavaria, records the following case in the *Aerztliches Intelligenzblatt* of successful operation for strangulated obturator hernia. A countrywoman, 65 years of age, complained of colicky pain, constipation, and flatulence, and on two occasions vomited. She also had pain in the left foot, and the thigh was swollen, and the entire extremity was numb. On close examination a fulness was detected in Scarpa's triangle, and pressure in this place elicited pain. On deep palpation, an indistinctly-circumscribed, hard, smooth swelling was found on the inner side of the femoral vessels, over the adductor longus. On vaginal examination, fulness

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could be detected on the left side of the pelvis. Taxis having failed, an incision was made from below the pubes three inches along the border of the adductor longus. This muscle was then cleared by dissection and drawn inwards, partly exposing the pectineus. The swelling, about the size of a pigeon's egg, was now exposed. The sac did not contain fluid; the intestine lay immediately against its inner wall, which consisted of thick œdematous tissue, easily lacerated; its outer layer was aponeurotic. The intestine was congested and very tense. The neck of the sac was found with the finger, and the constriction divided with a straight probe-pointed bistoury, and the hernia was reduced. There was considerable venous hemorrhage from the wound. Notwithstanding recovery was delayed by suppuration of the wound, the patient, in six weeks, was entirely restored to health.—*British Medical Journal.*

THE ACTION OF SODIUM SALICYLATE ON THE HEART.—Prof. Maragliano, of Genoa, has investigated this subject afresh, the results of previous observers being in many points contradictory. Some make out that the heart is weakened, others that it is strengthened, by the salicylate. Liebermeister, for instance, in Ziemssen's Cyclopædia (vol. i.), says he never gives the salt to a patient whose heart is weak, and he advises that it should never be prescribed in such cases. Maragliano made a triple series of observations to determine the question. In the first, patients who were taking the salicylate regularly were examined sphygmographically before, during, and after the exhibition of the dose, morning and evening. In the second, the pulse-curve of other persons was taken before and after the exhibition of a single five-gramme dose. In the third, the arterial pressure was measured by Basch's method before and after the exhibition of a single five-gramme dose. The results showed that—(1) As the dose was gradually increased in patients of the first class, the pulse became progressively stronger, and the systolic line of the sphygmographic trace became higher. (2) After the single dose the pulse was stronger and the systolic line higher; the increase appeared an hour after the dose, reached its maximum in two to three hours, and disappeared after three to five hours; the normal dicrotism was accentuated, and often passed into tricrotism. (3) The arterial pressure rose about an hour after the exhibition of a single dose, and returned to the normal about three hours afterwards. The rise in pressure varied between ten and twenty millimetres of mercury. These results indicate unmistakably that no depressing influence is exerted on the heart by the salicylate.—*Centralbl. f. Med. Wiss.; Practitioner.*

THREE SUCCESSFUL CASES OF NEPHRECTOMY are reported by J. Knowsly Thornton (in the *Lancet*, May 26),—in a child of 7 years, a married woman of 26, and a widow of 58 years, respectively. The first was one of hydronephrosis, the second a scrofulous pyonephrosis, and the third a nephritic abscess due to pyelitis following impaction of a calculus in the ureter. The second case had probably a similar origin. In the operation Listerian precautions were carefully observed, and the operator especially lays stress upon the advantages of the lateral incision over the ordinary one in the lumbar region. He also especially recommends securing the stump of the ureter in the abdominal wound, so that it may not drain into the peritoneal cavity. The operation of Langenbück has so many advantages that he would not return to the loin-operation with its difficulties and uncertainties. He is inclined to recommend an exploratory incision by the lateral abdominal section, with careful Listerian precautions, in any case in which it is of importance to examine thoroughly the kidney and ureter. In one of the cases symptoms of carbolic intoxication appeared, which compelled a substitution of a borated dressing. All the patients made good recoveries.

PARALDEHYDE: A NEW HYPNOTIC AGENT.—Mr. John Brown writes to the *British Medical Journal* that he has used with satisfaction this new drug on several occasions. From thirty to fifty minims constitute the dose for its hypnotic effect. He says that it produced sleep, in most cases, in a few minutes after administration, lasting from three to seven hours. In one case a slightly-depressant effect upon the heart was observed. It produces a peculiar burning sensation in the mouth after taking it, otherwise no disagreeable effects were noticed. Its action is very much like chloral, but at present it is about sixteen times as expensive, otherwise it might prove a useful substitute.

MISCELLANY.

THE LANCET ON THE NEW YORK CODE.—In a recent editorial the *Lancet* notices Prof. Flint's recent brochure on Medical Ethics and Etiquette, and warmly supports its teachings. Speaking of the New York Code, it very justly condemns it in the following language:

"It is well known that a somewhat sharp difference of opinion has arisen among our transatlantic brethren lately on the question of professional intercourse with homœopaths. Though the principles of medical ethics are good for all time, new questions of application arise. Homœopathy is an instance. It is a thing of yesterday. It is not so much as mentioned by Percival, and the profession has had to deal with it as a novelty. Hitherto the profession has been practically unanimous

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in refusing consultation with homœopaths, either because their practice was based on an exclusive dogma which is contrary to professional ethics, or on the ground, as Dr. Flint puts it, 'of assuming a distinctive appellation,' implying an essentially distinct system of practice and an attitude of antagonism to the regular professor. Dr. Flint does not so much object to a man holding any dogma, even an exclusive one, even one so absurd as homœopathy, as to his assuming 'a distinctive appellation.' This is very much the same ground as that taken by our own College of Physicians, which called upon its members to uphold the dignity and freedom of the profession by discountenancing those who trade upon designations implying special modes of treatment. Our own view is that, of two men practising homœopathy, the one calling himself a homœopath and the other not, the former is the honester man of the two. But it is not 'for the good of the patient,' which is the great end of medical ethics, that we should meet either of them. Such a consultation is misleading to the patient, and likely to be compromising to both parties.

"The New York Medical Society has altered, as is well known, the National Code of Medical Ethics, which declares that 'no one can be considered a regular practitioner or a fit associate in consultation whose practice is based on an exclusive dogma, to the rejection of the accumulated experience of the profession,' etc. It proposes to authorize consultation with any registered or qualified practitioner, whatever the absurdity or exclusiveness of his dogma, and whatever may be the trade label that he adopts. It is beyond the power of the New York Medical Society to impose such consultations on men who respect themselves or their patients, or the accumulated experience of the profession; and we shall be much mistaken if, under the presidency of Dr. Flint, the American Medical Association does not uphold its own moderate and dignified definition of a regular practitioner, as quoted above. Free institutions are admirable, but they must include freedom for those who decline to be warped by a dogma, or compromised by one who believes, however honestly, in an absurdity."

PRACTICAL ANTI-VIVISECTION PROTEST.—The Paris correspondent of the London *Lancet* gives the following interesting incident:

"It will be recollected that some three or four months ago Prof. Brown-Séquard submitted a paper to the Academy of Sciences giving the results of some experiments he had performed on some animals with carbonic acid gas, which he applied to the larynx, and thus produced local anæsthesia, with the view of facilitating certain operations on that organ, and without causing any pain to the subject. On Tuesday last, while the professor was giving practical demonstrations of these experiments on a monkey, in the presence of a rather large mixed audience, at the College of France, a rather sensitive lady, moved with indignation, left her seat, went straight to the Professor, and struck him a blow with her umbrella, which, of course, rather astonished him, but, without losing his equanimity, he had the lady removed from the amphitheatre and given over to the police. Here she endeavored to establish that the law for the protection of animals was on her side, which the Commissary of Police admitted for the time, but he did not see that this justified her conduct, and that, at any rate, she had no right to take the law into her own hands. She is therefore to be tried for the assault, and it is anticipated that this will give rise to new legislative measures for regulating the practice of vivisection in this country. It is to be remarked that the medical journals are rather silent on the incident, but the local newspapers have taken it up, some being for and others against vivisection; but all are unanimous in asserting that if it is necessary for the furtherance of science it need not be made a spectacle of, and should be confined to members of the profession. In France, however, this would be somewhat difficult to manage, as all lectures in the Government institutions are open to the public; but what may be done is that in similar circumstances as the present the lecturer may request oversensitive persons to leave the amphitheatre. Professor Brown-Séquard deserves great credit for his perseverance, and, nothing daunted, he is determined to continue his interesting experiments. He has this time selected monkeys for his subjects as being the nearest approach to man in their conformation, and thus hopes that in sacrificing a few more monkeys he will render service to humanity."

FISKE FUND.—The Trustees of the Fiske Fund, at the annual meeting of the Rhode Island Medical Society, held at Providence, July 21, 1883, announced that they had made no award on the subjects proposed for the present year.

They propose the following subjects for the year 1884:

1. The origin and progress of the malarial fever now prevalent in New England.
2. Original investigations in household hygiene.

For the best essay on either of these subjects worthy of a premium they offer the sum of three hundred dollars.

Every competitor for a premium is expected to conform to the following regulations,—viz.:

To forward to the Secretary of the Trustees, on or before the first day of May, 1884, free of all expense, a copy of his dissertation, with a motto written thereon, and also accompanying it a sealed packet, having the same motto

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inscribed upon the outside, and his name and place of residence within.

Previously to receiving the premium awarded, the author of the successful dissertation must transfer to the Trustees all his right, title, and interest in and to the same, for the use, benefit, and behoof of the Fiske Fund.

Letters accompanying the unsuccessful dissertations will be destroyed by the Trustees, unopened, and the dissertations may be procured by their respective authors, if applications be made therefor within three months.

JOB KENYON, M.D.,
OLIVER C. WIGGIN, M.D.,
HORACE G. MILLER, M.D.,
Trustees.

CHARLES W. PARSONS, M.D., Providence,
Secretary of the Trustees.

DEODORIZERS AND DISINFECTANTS.—Dr. W. E. Buck, having used the whole round of disinfectants (carbolic acid, sanitas, terebene, resorcin, creasote, boroglyceride, chloride of zinc, charcoal, etc.) for cancerous ulcers without allaying the fetor or keeping the ulcer clean, tried a saturated solution of hyposulphite of soda added to an equal quantity of water, and found it exceedingly efficacious. The ulcerating surface was well syringed and washed with the solution, and was then covered with rags steeped in the solution. The granulations were kept clean, and the fetor was well kept under. Most disinfectants seem to lose their virtue after a few days' application, but he had used this one for months in the same patient with continuous good effects. It is cleanly, has no smell, does not stain, and is very cheap.—*British Medical Journal.*

THE ST. LOUIS MEDICAL SOCIETY, fearing that a preamble and resolution offered at the recent meeting of the American Medical Association by Dr. Atwood might cause misunderstanding as to its position with relation to the Code, passed the following resolution at its meeting in June last:

"*Resolved*, That the St. Louis Medical Society distinctly repudiates the statements contained in said preamble, and again expresses its fealty to the existing Code of Ethics as a time-honored and most suitable fundamental law of the profession, and specially deprecates any action calculated to reflect upon its loyalty to those principles which have heretofore secured immunity from the machinations of schismatics within or enemies without."

ORIGIN OF BOTHRIOCEPHALUS LATUS.—Braun, of St. Petersburg, claims that the pike is the source of the broad tape-worm, just as the pig is the source of tænia solium. Medium-sized pikes may contain as many as forty or fifty worms. Out of sixty pikes examined for them, there was only one in which traces of the bothriocephalus were not discovered in the muscle.—*St. Petersburg Medicinische Wochenschrift.*

SORE NIPPLES.—Dr. Favre (*St. Petersburg Medicinische Wochenschrift*) is of opinion that there are two varieties of these, fissures and erosions, and believes that the latter are to a large extent due to tight-fitting dresses and pressure by corsets. He advises that the nipples be sprinkled with bismuth, dry, or that this be made into an ointment in the proportion of one of bismuth to two of vaseline. This procedure has often resulted in a cure within twenty-four hours.—*Gaillard's Medical Journal.*

MR. W. F. PHILLIPS advocates, in a recent communication to the *British Medical Journal*, the use of belladonna in hay-fever. He reports a case in which one minim every hour of the succus belladonnæ yielded entire relief to the symptoms.

THE *Louisville Medical News* has made a change in its editorial staff. Dr. L. S. McMurtry has retired, and is succeeded by Dr. H. A. Cottell, who formerly was an editor of that journal.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY FROM JULY 28 TO AUGUST 4, 1883.

SUTHERLAND, CHARLES, COLONEL AND SURGEON, MEDICAL DIRECTOR MILITARY DIVISION OF THE PACIFIC AND DEPARTMENT OF CALIFORNIA.—The leave of absence granted by S. O. 64, Head-quarters Military Division of the Pacific, June 30, 1883, is extended two months. S. O. 168, A. G. O., July 23, 1883.

BAILY, JOSEPH C., MAJOR AND SURGEON.—Assigned to duty as post-surgeon at Fort Concho, Texas. S. O. 87, Head-quarters Department of Texas, July 19, 1883.

TURRILL, H. S, MAJOR AND ASSISTANT-SURGEON.—Granted leave of absence for one month, to commence September 1, 1883. S. O. 77, Department of the Platte, July 26, 1883.

APPEL, A. H., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Granted leave of absence for two months, with permission to apply for an extension of one month. S. O. 30, Head-quarters Military Division of the Atlantic, July 20, 1883.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY FROM JULY 21 TO AUGUST 4, 1883.

P. A. Surgeon J. D. GATEWOOD detached from the "New Hampshire," and ordered to hold himself in readiness for sea-service.

Assistant-Surgeon PHILIP LEUCH detached from the Receiving-Ship "Franklin," and ordered to the "New Hampshire."

Assistant-Surgeon HORACE B. SCOTT ordered to the Receiving-Ship "Franklin," Norfolk, Virginia.

Surgeon D McMURTRIE detached from the Receiving-Ship "Franklin," and granted sick-leave.

P. A. Surgeon ROBERT WHITING granted one month's leave.

Surgeon J. W. COLES ordered to the Naval Hospital, Philadelphia, Pennsylvania.

P. A Surgeon E. H. MARSTELLER detached from the United States Steam-ship "Hartford," and granted sick-leave.

P. A. Surgeon J. F. BRANSFORD detached from the Naval Academy, and ordered to the "Hartford."

Medical-Inspector E. S. BOGERT detached from the Navy-Yard, Norfolk, on August 30, and ordered to the United States Steam-ship "Trenton," September 1.

P. A. Surgeon N. McP. TIREBER detached from the Navy-Yard, Norfolk, on August 30, and ordered to the United States Steam-ship "Trenton," September 1.

P. A. Surgeon J. D. GATEWOOD ordered to the "Trenton."

Surgeon B. H. KIDDER detached from the Naval Station, Port Royal, and ordered to the Navy-Yard, Norfolk, August 30.

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PHILADELPHIA, AUGUST 25, 1883.

ORIGINAL LECTURES.

CLINICAL LECTURE
ON SHOCK AND SURGICAL FEVER.

BY GEORGE McCLELLAN, M.D.,
One of the Surgeons to the Philadelphia Hospital.

Delivered at the Hospital, May 9, 1883.

Reported by WILLIAM H. MORRISON, M.D.

GENTLEMEN,—Having shown you several interesting cases, I now want to speak to you about shock and traumatic fever in connection with two other patients upon whom I operated about a fortnight ago. I always try to tell you just what occurs in my practice here, because I want you to learn, and it is most important that you should understand, elementary principles. I have shown you more or less operating, and have often laid stress upon the importance of preliminary measures; but now I want to say a few words about the after-treatment. The two cases to which I refer are an amputation of the thigh and an excision of the wrist. On Friday last I visited my wards, and was so well satisfied with the condition of these two patients that, having a great deal to attend to, I thought that I could safely leave them on Saturday. I returned on Sunday and found these cases in a deplorable condition. What had taken place between Friday and Sunday? Traumatic fever had developed. Both cases had previously done exceedingly well, and it was then the eleventh or twelfth day after the operation. The man with the excision of the wrist was so well that I told him he might sit up in bed, and had hoped to bring him before you to day. In the case of the amputation there were other troubles that made me more apprehensive as to the result.

On Saturday the daughter of this man came to the hospital to see him. She was not aware that her father had come into this institution. It was a shock to her, but she should not have given way as she did. I am informed by the nurse that she had an hysterical attack, and abused and found fault with her father for a condition of things for which he was not responsible. So it is, among the lower as well as the higher classes, that we have to contend with interference from the friends and relatives of the patient. I have often seen a man perish much sooner than he would otherwise have done, by the meddling of kind relatives. This poor fellow became feverish and delirious, and never passed from the state of delirium until his death, which occurred this morning. The fever abated and the symptoms improved, but treatment proved ineffectual.

The case of excision of the wrist was one in which I took a particular interest. It required much time and thought. It was a complete excision, involving the lower ends of the radius and ulna, all the carpal bones, and the heads of the middle metacarpal bones. The arteries, nerves, and tendons were all preserved. The operation was entirely successful, and the case progressed most encouragingly until Friday, the tenth day after the operation. On Sunday a change had occurred. There were symptoms of pyæmic inflammation,—of infection of the general system from septic influences in the wound.

To this subject of fever after injuries I wish briefly to call your attention, after first considering the subject of shock. Let me say at the outset that the first effect of any injury or wound, wherever it may occur, is upon the nervous system. The effect upon the nervous system is manifested by disturbance of function and by loss of power, the evidences of which in the system are grouped together under the name of shock. In proceeding to take this up for systematic study it will be necessary first to consider what constitutes shock, next what causes it, its symptoms and course, and, finally, its treatment.

In my remarks I shall quote rather freely from a lecture upon this subject which I delivered a short time since:

"When any accident or injury has been received by the living body, it is through the medium of the nervous system that the immediate effects are communicated. After the action of injurious causes, of whatever nature, a variety of phenomena usually precede the peculiar and morbid state of the blood-vessels, which gives rise to the condition known as inflammation.

"The first result of an injury is characterized by disturbance of function, owing to the impression which the nervous system

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has received, and this condition is generally defined as *shock*. When any part has been opposed to any kind of sudden force, it may be rendered torpid without involving the whole constitution. This form of shock has been called partial, in contradistinction to the universal, where the effects of an injury have been more generally propagated, becoming the evidences of what the old surgeons used to call constitutional alarm.

"Although the *causes* of shock are as numerous as the variety of injuries and the intensity and mode of their operation which the body is liable to, they may be classed under four heads:

"1. Those which act on the body itself.

"2. Those which act on the mind.

"3. Those which act on both the body and mind in equal or unequal degrees.

"4. Cold.

"In order to understand how these different causes may act and produce the symptoms of shock, we must bear in mind the intimate relations which exist between the two great divisions of the nervous system, the cerebro-spinal and the ganglionic, for impressions made on the one are communicated to the other.

"The *symptoms* of shock are usually in proportion to the intensity of the impression which the system has received. In the less severe forms we find a paleness or languor and universal sense of coldness, sometimes attended with tremors and fright and hurried respiration. In graver forms there will be a small, intermitting, or tremulous pulse, irregular or sighing respiration, shivering or rigors, with imperfect apprehension and incoherency of mind, frequently complicated with vomiting and convulsions. Again, the patient will be either delirious or comatose, with a cold, clammy sweat and involuntary discharges, presenting the appearance of extreme or protracted syncope. This form has been termed *overwhelming* shock, or *collapse*.

"As many of the most important surgical operations are unavoidably performed during the condition of shock, and as it is likewise one of the most serious complications resulting from many others, modern surgeons have given it the most careful consideration and anxious thought. Among others, Mr. Furneaux Jordan has made use of the thermometer and the sphygmograph, with the view of giving greater precision to our knowledge of the subject. He has found invariably that during the section of bone the thermometer indicates a fall in temperature, although no change occurs when the soft parts are cut. In many cases of amputation of the thigh, an operation in which the cut surfaces of the soft tissues are perhaps larger than in any other operation, the thermometer indicated a sudden fall of temperature the moment the saw was brought into action upon the bone. He gives in explanation of this the view that, although the nerves are much smaller and fewer in bone than in the skin and soft parts, yet the greater laceration which they are subjected to by the action of the saw gives rise to a greater impression or shock, as manifested by depressed cardiac action and lowered temperature. In his hands the sphygmograph has indicated marked impairment in the circulation during the existence of any depressing influence upon the nervous system. These facts are extremely interesting, and it is worthy of note that they were derived from observations 'taken on the operating-table,'—a guarantee of their accuracy, and of the indomitable perseverance of their discoverer, who is certainly one of the most original workers in the progressive field of modern surgery.

"There is a variety of shock which has not been often dwelt upon by surgical writers, and which, I believe, my grandfather was one of the first to draw attention to. Owing to the deceitful character of the symptoms, he called it ***insidious shock***, and described it somewhat as follows. In some very severe cases of injury a peculiar kind of shock is given to the nervous system where there is no corresponding disturbance manifested. A great joint has been torn open, a terrible compound fracture is present, or several of the large muscles and nerves have been lacerated, and yet the case looks altogether too well for one of such magnitude. The patient suffers no pain or inconvenience of any kind, the pulse and respiration remain normal, and by-standers apprehend no danger from the appearances. The only symptom that such a case affords of the termination that is threatening is the melancholy cast of countenance, which would seem to indicate an unhappy foreboding of the soul. As often as the surgeon approaches the bedside of the patient he will

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look up with a stare of alarm and suspicion. This is the most dangerous kind of shock, and it can only be accounted for by the supposition that from the very suddenness and intensity of the impression the foundations of life are undermined, and no further elaboration of the great principle of innervation can be effected. I am inclined to think that the thermometer will be found to render valuable information in cases of insidious shock.

"There are circumstances which modify the phenomena of shock,—the locality of the injury which gives rise to it, the sex and age of the patient, and the state of the general health at the time of the accident; but more especially the idiosyncrasy of the individual.

"With regard to the locality, injuries to the head and spine are among the most important, as they necessarily implicate the great nerve-centres, upon which depend all the actions which constitute life. The skin is peculiarly endowed with sentient nerves which convey impressions immediately to the nerve-centres, and, therefore, in cases of severe burns and scalds, we have very dreadful forms of shock. Injuries to the thoracic viscera are accompanied by great shock, but those involving the abdominal organs are still more serious.

"Owing to the peculiarly emotional character of the female sex, which renders women more susceptible to mental impressions and to the varying physiological conditions which they are subject to during an important period of life, it has been supposed that they were prone to a severer form of shock than men suffering from similar injuries. Observation has induced the belief that this is not so, but rather that a woman bears injuries better than a man.

"When shock occurs in the aged, even if the body is free from disease, the general system is so enfeebled by the ravages of time, and the forces of life are so impaired, that, although the manifestations of an impression are less intense, they are apt to be persistent, approaching somewhat in character the condition I have described as insidious shock. In the young, on the contrary, where the vital forces are characterized by energy, and chiefly occupied with the processes of development and growth, an injurious impression is always strongly marked, but it is speedily overcome by the recuperative tendency always stronger in childhood. This accounts for the remarkable manner in which children are capable of surviving accidents, such as falls from windows, etc., and the generally favorable results of all the graver operations which are often so surprising to the inexperienced.

"As shock is a metamorphosis of nerve-force, when an injury has been received by an adult whose general health is unimpaired the nature of the subsequent depression is correspondingly great. If, however, disease is present at the time of the infliction of the injury, the forces of life having been already drawn upon, the violence of the shock is generally diminished. The system has become accustomed, as it were, to the existing shock, and looks upon any new impression as if it was but an aggravation of the former. This is seen in cases of amputation of limbs for diseased joints, where not only is the shock less than when similar operations are performed for uncomplicated injuries, but the system seems to rouse out of a state of torpor and become invigorated through the relief from the perpetual distress it has undergone from the presence of the offending member. Any morbid organic affection existing at the time of the reception of shock naturally implies a disadvantageous condition, and very rarely, even with the help of surgical skill, can the system rally against the double invasion.

"Very often cases of a puzzling character are met with where the effects of shock as manifested through the symptoms can only be accounted for by idiosyncrasy. Persons have been known to faint at the sight of blood, or at the very thought of an operation; again, there are those who will unflinchingly bear the keenest suffering. Brave soldiers, who have never known fear on the field of battle, will tremble like a leaf when the surgeon approaches to examine a most trivial wound. It is curious to consider how far fortitude, courage, and pluck depend upon circumstances, among which habit is perhaps the most powerful and the least appreciated. A surgeon who may be a bold and skilful operator is not likely to become an enduring patient under the knife. In no instance is a little knowledge a more dangerous thing. Those who know most readily acknowledge how much more there is to be known.

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"It must not be supposed that shock is always hurtful, for at times and under certain circumstances it exerts a beneficial effect by inducing an increase of excitement throughout the system, which is called reaction. In vigorous constitutions this generally happens immediately, as when reaction follows a shower-bath, or even after slight injuries, and the consequences are favorable, because the functions of the body, being in harmony, are able to resist the disturbance, and nature readily regains her equilibrium; but when reaction has been delayed by an interval of prostration, especially if there is any predisposition to disease, vascular engorgement, irritation, and finally inflammation are apt to result.

"As it is evident that reaction, when it occurs, is brought about by the forces of nature acting through their own impulses, the *treatment* should always be to assist, and at the same time to counterbalance, the contending influences in the system, for we may have as a consequence of the sudden increase of excitement the very stimulus of life, acting in a morbid degree, becoming the foundation of what is known as constitutional irritation.

"There is no class of affections which more severely test the judgment and skill of the surgeon than the management of the various forms of shock. In the slighter cases, arising from whatever cause, it is wisest to wait and watch, maintaining mental and bodily rest, and using only such means as nature seems to call for to help her in her efforts at repair. But in the severest forms of shock, when an immediately fatal result is threatening, the greatest promptitude of action is required to foster the lingering spark of life, which, as long as it lasts, gives hope; and, reasoning upon philosophical grounds, based upon the evidences I have endeavored to bring before you, an attempt should first be made to restore the temperature of the body by the application of external heat, for death occurs in such cases from cold. At the same time, stimulants should be given in moderate doses (the best form of which experience has proved to be brandy), in order to secure the generation of internal heat and to accelerate the heart's action.

"When reaction has become established, the treatment should be conducted on the general principle of good nursing.

"Chloroform, undoubtedly, has a prostrating influence upon the circulatory as well as the respiratory apparatus, and in this way may be itself capable of inducing shock, while the effects of ether seem to be principally upon the respiratory functions, and therefore this agent is generally regarded as the more safe; but anæsthesia, however produced, is certainly advantageous in doing away with the various mental influences which, as we have seen, are so often causes of depression. For the purpose of guarding against shock in cases requiring grave operations, most surgeons now resort to the administration of stimulants and the subcutaneous injection of morphia *before* the inhalation of an anæsthetic is begun, with the view of sustaining the vital energy and at the same time subduing the sensibilities."

Gentlemen, I can hardly lay too much stress upon the subject of shock. Rough treatment and want of consideration for the feelings of the patient have a great deal to do with the causation of shock. You should bear this in mind, and endeavor by kindness and gentleness to allay apprehension. Confidence in yourselves will often beget trust, but it will never hurt you to be sensitive of the sufferings of others. Although to the looker-on the surgeon does his work as a mere matter of business, yet we all know how hard it is to cut down on living tissue, and cannot help feeling for our patients. I do not favor rough and brutal surgery, but delicate manipulation. If you can gain the confidence of the patient and make him feel that you will not injure him unnecessarily, he will submit himself to your care more readily and be less likely to suffer from shock.

As I have said, shock occurs immediately on the receipt of an injury, from an impression on the nervous system; it precedes any effect on the circulatory system, which constitutes inflammation.

Traumatic fever, on the contrary, is a condition of things which comes on in from eight to thirty-six hours after an operation or after the receipt of an injury. It is sometimes preceded by a rigor, restlessness, and nervous apprehension. The tongue is dry and coated, the pulse quick and irritable, and the usual symptoms of fever present themselves. This fever arises from the local cause. It is called traumatic fever from the nature of its origin,—traumatism. The fever is rarely characterized

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by an excessively high temperature. The temperature may run up to 101° or 102°, but rarely reaches 105°. When we perform any capital operation we have always to anticipate the appearance of surgical fever. We must keep a chart of the temperature, pulse-rate, and respiration, and guide our action by that chart. If the temperature and pulse go up, we investigate further. Costiveness is usually found. We then administer a saline purge, or, if we desire to produce a decided effect on the alimentary canal, a calomel purge. We also give the liquor potassii citratis, sweet spirit of nitre in combination with a small amount of morphia to produce quiet, and to overcome nervousness, irritability, and pain. Such is the treatment of ordinary traumatic fever. This fever is always present in proportion to the severity of the injury and to the previous condition of the patient. It is more severe in a man who while in perfect health meets with an accident than it is in a man who after suffering long with disease has an operation performed. The disease has prepared the man for shock. The disease is, as it were, a continual shock. The operation removes the cause of shock. This is the kind of surgery that we meet with in this hospital. In the general hospitals, where they have more acute surgery, more decided traumatic fever is met with.

After an injury a patient may do well for a couple of weeks, when he will have what developed in the patients to whom I have referred,—secondary traumatic fever. If, after an operation of magnitude, the bedding is not kept clean, or the room is not properly ventilated and the air is not pure, or the room is kept too hot, you may expect to have secondary traumatic fever.

This fever, coming on in a week or ten days after an operation, is always dangerous. It indicates a condition of affairs which you can only learn to understand by experience. When the pulse suddenly goes up to 125 or 130 per minute, and the temperature is 101° or 102°, it indicates that there has been a collection of pent-up discharges either in the wound itself, or, by metastatic change, in some other part. The lungs, kidneys, and other organs must be carefully examined, and if any trouble is found it is to be treated in an appropriate manner. If the bowels are costive, you can do as I did in the case of excision of the wrist,—administer a purgative. The pulse of this man was about 140 per minute, tremulous, and without consistency, and the temperature was very high. I gave him five grains of calomel, followed, in a short time, by a dose of castor oil. By this means I relieved the portal circulation, which is one of the most important things to do in these cases. The great veins are filled with the elements of broken-down tissue, which is carried almost directly to the heart. There was an immediate fall of the pulse-rate and temperature, and since then there has been a copious discharge from the wound, which was dressed with the sponge dressing. I still doubt whether I shall be able to save his hand; but his general condition is greatly improved.

There is one other form of traumatic fever,—that is, complicated traumatic fever. It is thought by some surgeons that this form is characterized by the entrance of pus into the blood, and hence we have the names pyæmia and septicæmia. Pyæmia is a bad name. It means blood with pus in it, but there is very little proof that pus is ever absorbed into the blood. Dr. Agnew in his recent writings, and many others who view this matter from a rational rather than a theoretical point of view, doubt the fact that pus ever gets into the blood, unless it be from the opening of an abscess directly into a vein or an artery, as may happen in aneurism or in cellulitis around a large vessel. Pyæmia, so called, is therefore a traumatic fever infecting the whole system and characterized by changes occurring in the deeper parts. Metastatic abscess appears in the lungs, liver, kidneys, and other internal organs. There may also be general toxic effects. This is always due to some septic matter taken from the wound.

When a limb is amputated, the wound must heal by inflammation. From the veins and arteries there exude the serum and corpuscles of the blood. Pus is formed by the white corpuscles of the blood coming in contact with the broken-down connective tissue. The septic influence comes from this mixture of blood-corpuscles, serum, and broken-down connective tissue-cells which have been torn by the knife during the operation.

The ways in which septic matter might find entrance into the system are through the veins, arteries, or lymphatics. It is doubtful if the veins or arteries take it

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up. Pus cannot enter the vessels and be pus. It must undergo physical and chemical changes before being absorbed. It is not probable that the lymphatics take it up, for, as you know, the lymphatic glands stop injurious matters from getting into the circulation. Whatever may be the way in which the septic poison enters the system, I want to impress on you that this form of traumatic fever results from a septic influence in the wound itself, which finds entrance into the system by some channel and produces the effects that I have mentioned.

The treatment must be based on general principles. If there is much fever, antiphlogistic remedies are to be administered. After the acute symptoms have subsided, tonics and good nourishing food constitute the proper systemic treatment. Locally, such measures should be adopted as will lessen the chances of pus-formation, and the best dressing is that which affords thorough drainage from the wound, thus enabling nature to bring her healing forces effectually into play.

ORIGINAL COMMUNICATIONS.

STRETCHING THE OPTIC NERVE.

Read before the Philadelphia County Medical Society, June 13, 1883,

BY M. LANDESBERG, M.D.,
Philadelphia.

MR. PRESIDENT AND GENTLEMEN,—You are undoubtedly still impressed with the sensation which was caused in the medical world by the first reports of Langenbach, Debove, Gillette, and others, showing the brilliant results which they had obtained by stretching the sciatic nerve in tabes dorsalis. In those times of high expectations and anticipations it seemed as if a new era of therapeutics were about to be inaugurated; it seemed as if this keen venture in surgery would open a new path which would lead us to certain victory in the struggle against one of the most fatal diseases of the human body. But certainly you also well remember how the enchanting dream of a moment had to vanish before the light of unbiassed investigations, and how extravagant hopes and expectations had to give way before plain and sober facts. The verdict seems to have been universal that nerve-stretching in locomotor ataxia can only be regarded as a symptomatic remedy, that its results are but temporary, and that all hopes of lasting benefit are doomed to be disappointed.

In those by-gone times of enthusiasm, induced by theoretical arguments and conclusions, I began my investigations into the therapeutic value of stretching the optic nerve in atrophic degenerations of the latter. Certainly, at no time did my aspirations run as high as those of my brethren in general medicine; on the contrary, my expectations have been from the very outset very modest, and I have taken up the matter prompted rather by the spirit of scientific interest than by the assumption to revolutionize the doctrine of therapeutics in these forms of ocular affections. I have been perfectly conscious that under the peculiar circumstances and conditions under which we are allowed to try the surgical expedient of stretching the optic nerve we cannot expect to get any conclusive evidence of the intrinsic value of the new method of treatment, whether the latter be followed by a relative success or by a total failure. Nerve-stretching is the last attempt we resort to in extreme cases otherwise beyond remedial aid. If we fail in our last desperate struggle, we have no cause whatever to blame for this failure the method itself: the latter may be valuable enough without being able to restore destroyed nerve-fibres or to instil new life into a dying organ. And if, on the contrary, the operation has succeeded in improving vision to a certain amount, are we allowed to infer that the operation would be equally successful in the earlier stages of the affection, and are we justified in trying the experiment? Philosophical inductions from analogy are as little permitted in these instances as the trial of a new and precarious remedy, so long as there are other resources at our disposal, on the good effects of which more reliance can be placed.

Stretching the optic nerve I have performed twenty-one times in thirteen patients,—sixteen times after the following method. The lids are separated by the speculum; the incision of the conjunctiva is made on the insertion of the internal muscle, and the latter secured by a silk ligature. The tendon of the internal muscle is dissected, leaving a small stump on the sclera, in order to facilitate the re-

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union, and Tenon's capsule and the underlying tissue are loosened from the sclera towards the optic nerve. The eyeball is turned outwards to the utmost by means of fixation-forceps, and a strabismus-hook is passed through the opening of the conjunctiva along the eyeball down to the optic nerve, which is caught from above and stretched "gently" three or four times. The eyeball is then brought into position, the internal rectus is reattached, and the conjunctival wound is closed by one or two sutures. Finally, a compressive bandage is applied for two to three days.

In five instances (Cases III., X., XI., XII., XIII.) I have performed the operation without tenotomy, by making a slit in the lower and outer part of the conjunctiva near the corneal margin and passing a strabismus-hook between the external and inferior muscle down to the optic nerve. This procedure is very simple, and more harmless than the other one, but it has the great disadvantage of allowing the optic nerve to slip very easily from the strabismus-hook, especially if the patient does not keep quiet.

The operation itself was in no instance followed by any bad consequences, either local or general, and the symptoms of reaction were such as we usually observe after a strabismus-operation.

The relative therapeutic value of stretching the optic nerve in the different forms of optic atrophy can be learned only from a study of the nature of the cases themselves in which the method has been employed. For this reason I beg leave to present to you, in as brief a manner as is compatible with the main purpose of the subject, the history of the following cases:

Case I. and II.—Mrs. B., 31 years old, had lost her eyesight during the course of erysipelas of the face and head, from which she had suffered during the month of June, 1881. My examination, made September 3, 1881, revealed the following condition:

External appearance of the eyes normal. The right eye has only a quantitative perception of light. The left eye sees movement of my hand close by. The flame of a candle in a dark room is discerned at one foot distance. The background of the eyes presents neuritic atrophy, with normal veins, but very thin arteries. General health is good.

Stretching the optic nerve in either eye, performed under narcosis, brought about no change in the right eye, although the patient was enabled to perceive daylight more brightly and more intensively than before the operation. In the left eye vision improved to discerning movement of my hand at one and a half feet distance, and distinguishing the shape of each of my fingers if kept close to the eye. The flame of a candle in a dark room was seen at three feet distance in all parts of the visual field.

This condition remained unchanged during a further observation of eight weeks.

The last examination, made June 13, 1882, showed:

Right Eye.—Absolute atrophy of the optic nerve. Quantitative perception of light doubtful.

Left Eye.—Discerns movements of my hand at one foot distance, and the flame of a candle in a dark room at two to two and a half feet distance. No change in the background of the eye.

Case III.—Seamstress, L., 22 years of age, had noticed the first symptoms of impairment of vision during an attack of erysipelas of the face and head, which had occurred in February, 1882. April 19 my examination revealed, —vision of the left eye about one-fifth of the normal. Right eye can only discern movement of my hand close by, and the flame of a candle in a dark room at one foot distance. Choked disk in the left eye, and neuritic atrophy of the optic nerve in the right eye. Treatment failed to improve in any way the condition in either eye.

Stretching the right optic nerve, performed May 13, was ineffective.

Case IV. and V.—Tailor, G., 45 years old, attributes the loss of his eyesight to a bad cold he had contracted in August, 1880. My first examination, made August 27, 1881, showed both pupils somewhat dilated and of sluggish reaction. The right eye sees movement of my hand in the temporal visual field only and close by; the left eye has only central quantitative perception of light. In either eye neuritic atrophy of the disk, with contracted veins and thread-like arteries.

Stretching of the optic nerve in either eye had no effect.

Case VI.—Shoemaker, T., 39 years old, had been treated by me successfully for optic neuritis which had developed consequent upon sudden suppression of habitual perspiration of his feet. The result remained stationary in the right eye; in the left eye relapse occurred after a year's interval, which rapidly destroyed vision. August 5, 1881, the eye counted fingers only close by, and discerned the flame of a candle in a dark room at three feet distance. Treatment was of no avail.

Stretching the optic nerve, performed September 2, increased vision to counting fingers at three feet distance, and to discerning the flame of a candle in a dark room at seven to eight feet distance. No change in the condition during a further observation of five months.

Case VII. and VIII.—Peddler, W., 37 years

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old, had noticed the first symptoms of failing of his eyesight in May, 1882, while recovering from typhoid fever. Treatment had no effect to check the progress of the morbid process, which destroyed vision within three months.

Examination, made November 21, showed pupils slightly dilated and of sluggish reaction. Optic disks whitish-blue, with normal veins and slightly-contracted arteries. Only quantitative perception of light in either eye. The flame of a candle in a dark room is seen at six inches distance, but there is no power of localization. No spinal or cerebral complications. Urine normal.

Stretching the optic nerve, performed November 23 and 24, effected a gradual improvement in the sensation of light, with restoration of the power of localization. November 27, patient discerned movement of my hand at one foot to two feet distance, and the flame of a candle in a dark room at six feet distance. Pupils reacted more freely. December 1, improvement has reached its acme. Movement of my hand is seen at three feet, the flame of a candle in a dark room at eight feet distance. Glittering objects kept close to the eye are easily discerned. This result remains stationary until the middle of January, 1883, to vanish gradually. In the middle of March we have the same condition as before the operation.

Case IX. — Laborer, E., 47 years old, has been suffering for the last two years from gradual loss of his eyesight, for which no assignable cause can be given. General constitution is good. With *the right eye* he counts fingers near by; *vision of the left eye* is reduced to $\frac{20}{40}$. *There is genuine atrophy of either optic nerve.*

Treatment has the effect of increasing vision of the left eye to $\frac{20}{30}$. The condition of the right eye remains unchanged. Stretching the right optic nerve, made October, 1881, has no result.

Case X.—Peddler, C., 47 years old, somewhat decrepit, attributes the gradual loss of his eyesight to a bad cold he had contracted several years ago. His general constitution is good. With the right eye he counts fingers at one foot distance. Pupil is somewhat sluggish. Visual field is concentrically limited. Vision of his left eye is $\frac{1}{14}$, with great limitation in the upper half of the visual field. The optic disk presents the picture of genuine atrophy.

Treatment improves vision of the left eye to $\frac{1}{8}$, but has no effect upon the right eye.

Stretching the optic nerve of the right eye, performed February 5, 1882, improves vision to counting fingers at eleven feet distance. The result remains stationary.

Case XI. and XII.—Laborer, P., 38 years old, of robust constitution, presented himself, March 20, 1882, with the complaint of rapid loss of his vision during the past six weeks, for which no assignable cause could be given. Both pupils were slightly dilated and very sluggish. Vision of the right eye was $\frac{1}{15}$; in the left eye there was hardly quantitative perception of light. Background of both eyes showed genuine atrophy of the optic nerve.

In spite of energetic treatment, vision of the right eye decreased daily. March 24, vision was reduced to $\frac{1}{40}$. March 28, the eye counted fingers only at one and a half feet distance. April 1, there was only quantitative perception of light. Background of the eyes remained unchanged.

Stretching the optic nerve in either eye was performed April 5. The operation had no effect upon the left eye, but improved vision in the right eye to counting fingers at six feet. This favorable result, however, was only temporary; very soon the morbid process reassumed its progressive course, to stop only when vision had decreased to counting fingers at one to one and a half feet distance.

Case XIII.—Mechanic, W., 53 years old, married for twenty-five years, and father of healthy children; confesses to having had syphilis about thirty years ago. His general constitution is good. His eyesight has been failing for the last three years. There are no spinal or cerebral complications.

With his right eye he counts fingers at ten feet distance. Pupil is somewhat dilated and sluggish. Field of vision is concentrically limited. With his left eye he sees only movement of my hand close by.

The optic disk in either eye is whitish and flat. Arteries are very thin; veins are slightly contracted.

Treatment improves vision of the right eye to $\frac{1}{8}$, but has no effect upon the left eye.

Stretching the left optic nerve was of no avail.

Case XIV. and XV.—Smith, H., 45 years old, has been suffering from tabes dorsalis for the past two years. There is decided ataxia and anæsthesia in the lower extremities, associated with belt-like pains around the body and absent patellar-tendon reflex. The gait is jerking. Closure of the eyes increases the symptoms of incoördination. Mental capacities are not impaired. Sexual appetite is almost extinct.

Disturbance of vision had been first noticed about a year ago. The right eye counts fingers at three feet and the left eye at one foot distance. Pupils are small, do not contract under bright light, but react upon efforts of accommodation and associated movements of the eyeball. The optic disks are white; veins are normal; arteries very thin.

Stretching the optic nerve in either eye, performed December 5, 1881, had the effect of increasing gradually vision of the right eye to counting fingers at eleven feet, and of the left eye to counting fingers at nine feet distance.

The result remains stationary for seven

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months, notwithstanding the constitutional disease follows its progressive course, leading to death by bed-sores.

Case XVI. and XVII.—Dyer, H., 47 years old, has been suffering for several years with rheumatic and lancinating pains in his lower extremities, and with numbness in the soles of his feet. Closure of his eyes reveals symptoms of muscular incoördination. Knee-phenomenon is absent. Tactile sensibility and muscular power are not abated. Sexual appetite has been very moderate in the last six months. General health is good. Patient had been infected with syphilis when twenty-one years old.

With the right eye he can hardly discern quantitative perception of light. Pupil is slightly dilated and insensitive. With the left eye he counts fingers at three feet distance. Pupil is contracted; reflex action is lost, associated action is very feeble.

Both optic disks are white on the temporal half and slightly reddish on the nasal one. Veins are normal; arteries are very thin.

Treatment with large doses of iodide of potassium greatly improves the general system, but has no effect whatever upon the condition proper of the eyes.

Stretching the right optic nerve remains negative.

Stretching the left optic nerve improves at first vision to counting fingers at five feet distance, which, however, gradually subsides, in the course of four months, to counting fingers at three and a half to four feet distance.

Case XVIII. and XIX.—Mechanic, D., 51 years old, had noticed the first symptoms of impairment of his vision in the spring of 1881, about three months previous to the appearance of the first evidences of tabes dorsalis. Treatment had no effect in checking the progress of the morbid process.

Examination, made March 3, 1882, showed: Complexion sallow and ashy. Muscles of the upper and lower extremities flabby. Marked anæsthesia in the lower limbs. Loss of consciousness of the exact position in the left limb; marked abatement of consciousness of position in the right one. Notable ataxia of the upper extremities, which show circumscribed anæsthetic patches. Knee-phenomenon absent. Sexual appetite extinct. Bowels costive. Functions of the bladder normal. Mental capacities not impaired.

Left Eye.—Pupil slightly dilated, insensitive to light, and only slightly reacting upon associated action. Counts fingers at one foot distance peripherically. Optic disk white, excavated. Veins normal; arteries contracted.

Right Eye.—Pupil irregular, slightly contracted; reflex action very feeble, associated action fair. $V = \frac{1}{20}$. Field of vision not limited. Central scotoma. Optic disk somewhat flat, whitish, and surrounded by an atrophic ring.

Stretching the left optic nerve, performed March 6, gradually improves vision to counting fingers at five feet distance. The result remains stationary until the last days of June.

Vision of the right eye begins to fail towards the middle of May, and rapidly decreases, unchecked by therapeutics. June 28, the right eye counts fingers only close by. For the first time since the operation the examination reveals a decrease of vision in the left eye, which counts fingers only at three feet distance.

Stretching the right optic nerve has no effect. The course of the affection is fatal in both eyes. August 3, there is hardly any perception of light in either eye. Both optic disks are chalky-white, with atrophic excavation. Veins very thin; arteries thread-like.

Case XX. and XXI.—Lithographer, C., 41 years old, had enjoyed good vision until the first days of October, 1881, when the sight of his left eye began to fail so rapidly as to be reduced to quantitative perception of light at the end of the sixth week of the affection. The right eye remained healthy until the middle of May, 1882, when its sight began to decrease, at first very rapidly, later on in slow progress and with intermissions. All possible remedies had been used without any avail.

Patient, a robust, stout man, has been afflicted since 1876 with gastric and rheumatic pains. His gait is slightly staggering; he walks with a stride, dragging along his left leg, and oscillates very considerably while standing with closed eyes. Patellar-tendon reflex is absent. There is numbness in the sole of his left foot, and marked abatement of tactile sensibility along the dorsal surface of the left leg up to the buttocks. The tactile sensibility in the right limb has not abated in the proper sense, but there is a slight retardation in the transmission of sensitive impressions to the brain. Muscular power is normal in either limb. There is, besides, a belt-like pain around the body, and a sensation of numbness and cold in the thumb and index finger of the left hand, with a sensation of formication in the latter. Sexual passion has moderated since 1880. All other functions are normal.

Left Eye.—Amaurosis.

Right Eye.—Counts fingers at four feet distance. Pupil contracted, very little sensitive to light, but reacts promptly under efforts of accommodation. Optic disk is white in its temporal half, and pale in the nasal one. Vessels are not changed.

Stretching the right optic nerve, performed August 23, 1882, improves vision to counting fingers at fifteen feet distance. Reflex action of the pupil is increased.

This result remains steady until November 17, when vision begins to fail again, gradually subsiding to counting fingers at one foot distance. At this stage I renewed, December 15, stretching of the optic nerve, which raised

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vision to counting fingers at three feet distance. But improvement lasted only until December 27. Amaurosis set in within a few days. Locomotor ataxia progressed rapidly.

CONDITION OF THE EYES IN STRABISMUS DUE TO OPTICAL DEFECTS.

Read before the Philadelphia County Medical Society, June 13, 1883,

BY WILLIAM S. LITTLE, M.D.,

Senior Assistant Eye Clinic of Jefferson Medical College Hospital.

OPTICAL defects, since the time that Donders asserted that "strabismus convergens almost always depends upon hypermetropia, strabismus divergens is usually the result of myopia," have been considered the leading cause in the deviations of the optical axes of the eyes that were not associated with paralysis of the external ocular muscles.

The causes assigned as productive of these two abnormal positions of the eyeballs, before Donders made his assertion of the influence of optical defects as a cause, became almost forgotten, and till the past few years have hardly been remarked upon. Hippocrates claimed heredity and association with epilepsy; Galen, a cramp of the muscles; St. Yves, due to contraction of the muscle; Buffon observed that myopia was present in some cases, and a difference in the visual power of each eye existed; Dieffenbach asserted that the difference in visual power of each eye was never the cause of squint.

Methods of treatment, prior to the correction of optical defects with a subsequent division of the tendon of the muscle at fault, differed. Paulus used a mask; Alkindus recommended closing one eye alternately.

Early in the eighteenth century, Taylor divided the tendon of the superior oblique; Ingalls, of Boston, in 1812, divided the internal rectus; Gensoul, in Lyons, in 1836, also Dieffenbach, in 1836, did the same operation. Cavárra, in 1836, and Eisenmann, in 1842, used electricity.

Strohmeyer, in 1838, brought the operation of division of the tendons of the muscles most prominently before the profession.

The influence that optical defects have as a cause, and the necessity of their correction, either with or without operative procedures, followed the older plans of treatment upon the publication of "The Anomalies of the Refraction and Accommodation of the Eye," by Donders, about 1860.

For a more full account of the history of strabismus, see "Geschichte der Ophthalmologie," by Hirsch, in "Handbuch der Gesammten Augenheilkunde," vii. 2, Graefe and Saemisch.

Till statistics were reported by Schweigger, optical defects had almost excluded any orthopædic influence. There seems to be now a tendency to give more credit to the influence of variation in the shape of the orbit; origin, length, and attachment of muscles to the eyeball, with a greater or less power in the action of these muscles; the internal muscle of the eye, the ciliary muscle, can vary also. Any of the above-mentioned variations can produce squint in eyes having no optical defects, as well as when optical defects exist; and here we must not forget that an undersized eye is hypermetropic, and an oversized eye is a myopic one; that the muscles might vary as well as the eyeball seems not unlikely.

Schweigger's statistics show that

Convergent strabismus existed in			21% with	E.
"	"	"	12% "	M.
"	"	"	65% "	H.
Divergent	"	"	35% "	E.
"	"	"	04% "	H.
"	"	"	59% "	M.

Optical defects are present in a large majority of cases of strabismus; but it is more apt to be the influence of optical defects, in eyes whose conditions are not normal, irrespective of the optical defect; from anomalies in the perceptive centres of sight, or in the retina; from opacities in the media that should be transparent, and in eyes whose ciliary muscle is not able to overcome the optical defects, so as to give clear or sufficiently distinct images for the retina to act upon, and whose external muscles cannot keep up the normal act of convergence for both eyes, associated with the power of accommodation.

Differences in the visual power of each eye from differences in optical defects, and even from opacities in the media or from want of percipiency in the retina, have been considered the principal factors in producing squint. Some time since, I went over my cases having a difference in optical value between each eye, to learn what influence this alone had in producing

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squint, and to obtain the percentage for strabismus.

I found that in twenty per cent. of cases differing in refraction of each eye, strabismus occurred; that in eighty per cent. of cases differences occurred without strabismus.

The amount of difference ranged as follows:

	Strabismus.	No Strabismus.
	(Converging.)	
H.	3.5 D— 0.50 D	2.5 D— 0.25 D
	(11)	(19)
M.	(Diverging.)	
	9. D— 4. D	2.5 D— 0.25 D
	(3)	(24)
Ah	(Converging.)	
	2.5 D— 1. D	5. D— 0.25 D
	(3)	(11)
Am.	1.5 D	3. D— 0.25 D
	(3)	(8)
Mixed As.	(0)	(9)

From corneal opacities with optical defects,

Strabismus.	No Strabismus.
4 cases.	6 cases.

A divergent strabismus existed in one case, with congenital displacement of each lens.

From vitreous opacities, no squints. In one case of congenital coloboma of choroid, near macula in each eye, convergent strabismus, each eye hypermetropic.

From disease in choroid, retina, or nerve, no strabismus was observed.

The eighty per cent. of cases with difference in refraction between the two eyes without strabismus is to be accounted for by the fact that full acuity of vision was obtained, either with or without the correction of the optical defect. The influence of the ciliary muscle and power of convergence of the external muscles was sufficient to maintain binocular single vision.

In the performance of this, many suffered from headache, irritated states of the eye, and an inability for prolonged work; slight defects in some cases causing more annoyance than marked ones.

The twenty per cent. of cases with differences in refraction and having strabismus; the ciliary muscle, without correction of the optical defect, could not maintain full acuity of vision, and the converging power was not equal to the task of maintaining binocular single vision; or, if equal to it, the amblyopic condition of the retina prevented, or the external ocular muscles were at fault.

It was found that where vision in the worse eye could be made equal to $\frac{20}{LXX}$, the better eye being equal to $\frac{20}{XX}$; in several cases without division of the internal rectus in convergent strabismus a full restoration of the optical axes occurred, or, where the operation was performed, a single operation gave full effect. Where vision was less than $\frac{20}{LXX}$ in the worse eye, the other having full vision or nearly so, an operation was required, sometimes not only on the worse eye, but also on the other, and the success not so marked.

In reference to amblyopia, it may be said that where it is congenital, though the correction is given for the defect recognized by the ophthalmoscope, no improvement in vision occurs; and yet I believe the wearing of the glass is a source of relief to the ciliary and external ocular muscles in their associated action with the better eye.

In case of amblyopia from non-use of the retina on account of an optical defect, vision does improve, and, if the correction is good, even full vision may be obtained. I reported one such case in the *Philadelphia Medical Times*, August 3, 1878, in a case of what was originally a convergent strabismus with a high hypermetropic astigmatism and operated upon without a correction. A divergent strabismus ensued; the correction was given, and $\frac{20}{XX}$ obtained; I divided the external rectus. I reported a similar case where Prof. William Thomson advanced the internal rectus. Two operations were required, and vision with the correcting glass + 2. D ⌒ + 3. D cyl. ax. 40° = $\frac{20}{C}$ (see *Philadelphia Medical Times*, September 13, 1879). Another case, reported in the *American Journal of the Medical Sciences*, 1880, was a divergent strabismus with myopia, the better eye nearly lost by an accident; the other eye with the correction equalled $\frac{20}{XXX}$ from vision of $\frac{2}{C}$ after years of disuse: the external rectus was divided.

It has been observed in my cases that a simple astigmatism, either hypermetropic or myopic, is associated with strabismus.

The present occasion hardly calls for a too long consideration of the subject, and I would refer you to what you may find in the "Hand-Book of Ophthalmology," by Schweigger, and in "Diseases of the Eye,"

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by Prof. Henry D. Noyes, who agrees with Schweigger in many particulars.

I believe a more marked consideration of the orthopædic condition, along with a full appreciation of the importance of optical defects, as a cause of strabismus, is now not out of place. A certain number of cases, despite the care given to the correction of optical defects, and one, two, or even three operations, do not yield success; and in these cases more attention must be given to the orthopædic side of the question.

The variation possible in length of muscles attached to the eyeball and of the ciliary muscle inside the eyeball, with the variable power they may exercise upon an eyeball of proper size, and much more so upon eyes that are too small or too large, makes the orthopædic symptoms necessary to be understood; for while the correction of the optical defects neutralizes the variation in the size of the eyeball, it does not overcome the muscular defects, if they exist, a fixed accommodation corresponding to a given convergence. The condition in strabismus, in some cases at least, is analogous to deformities of the foot or hand.

As to the treatment of strabismus, it is not the purpose of this paper to consider it; I have found, however, in some cases the use of electricity of value, in divergent squint especially. There is one point of importance, and that is the absence of diplopia, in cases of strabismus that are non-paralytic. I do not know of any cases where, at the time of observation, or after treatment, it has been complained of.

In one case recently treated, where there was a marked difference between the eyes, and no strabismus, the correction being given, diplopia occurred, requiring a division of the external rectus of the right eye. This eye had been considered amblyopic, but full vision was obtained, and the diplopia became very annoying.

The marked difference in position of the eyes with strabismus prevents the annoyance of diplopia, as in the worse eye the peripheral image on the retina does not give the centres of sight any too marked impression, or in eyes congenitally amblyopic the image is so clouded as not to be recognized. In amblyopia from non-use on account of an optical defect, the same holds good.

215 South Seventeenth Street.

SOME REMARKS UPON THE DIAGNOSIS AND TREATMENT OF FRACTURE OF THE NECK OF THE FEMUR IN ELDERLY SUBJECTS.

Read before the Philadelphia County Medical Society, June 20, 1883.

BY OSCAR H. ALLIS, M.D.,

Surgeon to the Presbyterian Hospital, to the Jefferson Medical College Hospital, and Lecturer on Orthopædic Surgery and Joint-Diseases in the Post-Graduate Course in the Jefferson Medical College.

MY subject would be robbed of much of its interest and real value were the two closing words omitted, and therefore, to render myself intelligible, I must define what I mean by "elderly subjects." It is obviously impossible from a practical stand-point to assign to age an arbitrary period, since some persons are more feeble and decrepit at fifty than others are at seventy. My definition may work itself out as I advance, and, merely to set the matter at rest for the moment, I will decide that all persons at the age of seventy may be fairly styled elderly.

Let us, then, examine the points of diagnosis in this particular injury; and first let me say that we are to bear in mind that we are called to treat a person *in advanced life*. There has been an injury which has rendered its victim powerless; and accompanying this injury there has been shock,—not infrequently so great as to prove speedily fatal, often such as to place life in extreme peril and from which the patient may rally slowly and imperfectly.

Many and conflicting problems arise at this point, some of which concern the surgeon and some the patient. The surgeon asks, Shall I be satisfied with a diagnosis that can be arrived at without increasing the shock to the patient? or shall I resort to anæsthetics? or, this being denied, shall I through manipulations produce the evidence of crepitus? or shall the age of the patient be regarded? shall everything that would increase shock be avoided?

The strong points in such a case are—

1. Age. At the age of seventy an injury that renders the patient suddenly helpless cannot be a dislocation. It must be a fracture or a bruise. At this time of life the bones are brittle and snap at slight provocations.

2. Shortening and eversion. These terms are but another name for preter-

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natural mobility. The limb is shortened because it is severed from the trunk and drawn up by the muscles about it. It is everted simply by its weight. The eversion of the foot is a simple question of physics.

3. Diminished tension. By comparing the limbs, the integument and muscles of the injured thigh will be perceptibly softer than its fellow, and if an effort is made to define the great trochanter it will be readily done on the injured side, but not so on the sound side.

This symptom—the relaxed condition of the fascia lata—is of great importance. One of its principal functions is to enable man to stand at rest. From the crest of the ilium to the outer surface of the external tuberosity of the tibia a band of fascia lata passes, the thickest, longest, strongest band of fascia in the body. When the thigh is broken in any part, this fascia is relaxed and becomes a valuable auxiliary to other symptoms in this injury. The injured limb lies its entire length upon the bed without producing any arching of the spine.

Upon these points, age seventy or over, —at which time of life there are not, probably, five recorded cases of dislocation of the head of the femur in all medical literature,—sudden loss of power in locomotion due to an injury, with pain on the slightest motion, shortening and eversion, with diminished tension and supineness, I would not feel justified in pushing my inquiries further: 1st, because the only remaining symptom, viz., crepitus, may not be elicited, even on the most unrestricted examination; 2d, because the absence or inability to elicit crepitus is no proof that the injury is not fracture; 3d, because, as there is not a single symptom of dislocation present, one is not justified in prejudicing the case by manipulation, either with or without ether.

The administration of ether or chloroform at this advanced age is always attended with risk, and to be avoided if possible; while the flexion and extension, the circumduction and rotation, necessary to produce crepitus, all of which must be repeated by every one professionally connected with the case, is an ordeal even for the robust, and not to be unnecessarily superadded to shock occurring in old age.

The second point is the *treatment;* and here problems of no little moment confront us. Our patient is seventy; and will he bear the prolonged restraint that is usually deemed necessary to insure good repair? Can he bear a confinement of six or eight weeks? He could not bear it in typhoid fever or paralysis, and he will not bear it in fracture. Often the sacral integument is macerated and sloughing in a week's time, and many a case dies of *bed-sore* that without this distressing complication would recover.

In my treatment of this class of cases I regard but two stages: first, that of shock, and, second, convalescence. From first to last I make the PATIENT my first care and regard the fracture as of secondary importance. During shock I keep him recumbent, shifting his position as it affords him relief, and placing pillows or some extempore contrivance about the limb for its support. If care is taken to shift the patient from side to side in bed, to change bedding and clothing whenever it is wet, no matter how often, if the patient is placed on his right side, his back, and left side, there will be no danger of bed-sores until he has sufficiently recovered from the shock to leave his bed; and this may be in a week, or less, according to the strength and condition of the patient. I am in the habit of ordering a movable platform upon which I can fix securely an easy rocking-chair. This I roll to the bedside, and with very little difficulty my patient is helped to the chair and rolled to a pleasant part of the room while his bed is being made. The first attempts to get him up are apparently attended with pain; but this is in a great measure due to fear and uncertainty of movements. After a few trials the patient will so far help himself as to require little additional assistance. At first he sits up an hour or more; but soon he will spend the entire day in his chair.

If the person is living in his own house, and especially if the house is small and attendance upon him in an upper bedroom would be irksome to other members of the family, I immediately appropriate the parlor or sitting-room to his use; and if permission is granted, I put half a dozen hooks into the ceiling over the bed, to which I attach ropes at such intervals as will help the patient to change his position in bed, or to leave his bed for the chair. So far as treatment to the fracture is concerned, I reassert that I almost entirely ignore it, knowing, as I do, the hazard one runs in confining an aged patient for any considerable period.

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In the foregoing remarks I have kept closely to my text, my rule of practice being that no procedure can be justified in establishing the diagnosis that will add to the shock of the patient, and no treatment employed that may be productive of mischief. But, it will be urged by some, what excuse have you to offer for thus wantonly abandoning your patient, leaving a fracture of the neck wholly to nature for repair?

To this I say, I never abandon my *patient*, but those do who insist upon treating the fracture and magnify its importance. These, I say, do abandon their patient, making his very existence secondary to the accident. But experience shows that the seeming neglect of the fracture is only apparent, not real. In a case of a man over eighty, who fractured the femoral neck by a fall of a few steps, I had no alternative but to shift him from bed to bed and make him comfortable. The accident occurred in midsummer, and for four months the man's life was in jeopardy. Health finally returned, and with it a useful limb. He could walk without a cane, though with a decided halt. Last winter a man in his eightieth year fell on the ice and was brought home helpless. The symptoms were well marked. I got him out of bed on the third day, and from first to last gave *him* my care and left the fracture to nature. He can now walk without a cane, merely to show how well he has succeeded, though he prefers a cane or a crutch.

Still, the question may arise, would not these have done better with special treatment? Are they not exceptional cases? To this I say, no. I do not believe that the *results* in treatment of fracture of the neck are brought about by splints, apparatuses, inclined chairs, or fancy beds. I believe the results are determined by the character of the fracture the instant it occurs. I make this statement after examining morbid specimens of recent and remote injuries, a study of which must convince any unprejudiced mind that in some cases nature has no resources that may avail the patient.

For those who say that Smith's anterior splint, Daniel's fracture-bed, and the reclining chair accomplish the double purpose of immobilization and comfort, I have no remarks: I am reminded of the lame Irishman, whose defence was that 215 Souter got the goods, that they were damaged, and, besides, he paid for them at the time."

Against the practice that I have advocated, it will be stated that daily shiftings in bed, and from bed to chair, will interfere with union, since by such a course the fragments will be disturbed and efforts at repair frustrated. Even were this conclusion a just one, I would say, better imperfect repair than a headstone. But it is an assertion, and nothing else, to say that carefully getting the patient up daily will produce a separation of fragments.

During the past winter, a female about fifty years of age, whose fracture was the result of a fall on the ice, came under my care about ten days after the injury. At this early stage the buttocks were already covered with bed-sores; and this, with the fact that she had incontinence both of bladder and rectum, made it necessary to shift her daily from one bed to another. This incontinence persisted, and no treatment for the fracture was instituted; and yet at the autopsy, about three months after the accident, there was not the slightest evidence that her ride home in an ambulance from the place where she received the injury, her being carried to the third story up narrow and winding stairs, her removal from this to the hospital, her daily shiftings from one bed to another, her final removal to her home and again being carried up stairs, ever changed the relations of the non-impacted fragments from the moment the fracture took place.

There is, however, a serious side to this subject. With every honest, conscientious endeavor to do that which is best for our patient, what defence will one have in the court-room when the case turns out badly? How will it sound in the jury's ears when the plaintiff's counsel says, "Gentlemen, I do not question the general skill and good intentions of the defendant, but I am forced to press upon you my convictions that he has not from first to last comprehended the nature or gravity of this case. He made no attempt at the outset to elicit crepitus, to determine whether the fracture was intra- or extra-capsular. He gave it no time to knit, but took him from his bed before a week had gone by. He claims that he was afraid of bed-sores. Why didn't he apply plasters? why didn't he order air-cushions or a water-bed? Ah, gentlemen of the jury, by a fatal misconception on the part of this surgeon,

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this poor man must end his days a helpless, hopeless cripple."

Unquestionably, the odds against the surgeon would be great in such a case, even though he could show that the treatment adopted were as old as Sir Astley Cooper. Here he has a lawyer struggling for a contingent fee, a jury full of sympathy for the patient, and to whom the pathology of fracture of the femoral neck is as Greek, living testimony whose faith in treatment is absolute, and authors whose latest editions eulogize methods never popular and long since abandoned.

In conclusion, I ask, what has been, is, and must ever be the outcome of all this? Will the surgeon risk his little all for the good of his patients, or must he steer his course by that true but selfish standard, "*self-preservation is the first law of nature*"?

Alas when age and decrepitude are not valid reasons for the exercise of the judgment!

PHILADELPHIA, 1604 SPRUCE STREET.

GENUINE ATROPHY OF THE OPTIC NERVE, AND TABES DORSALIS, DEPENDENT UPON SYPHILIS.

Read before the Philadelphia County Medical Society, June 20, 1883,

BY M. LANDESBERG, M.D.

THE relation of tabes dorsalis to syphilis is still a matter of controversy among the highest medical authorities, upon whose vast experiences we have mainly to rely for information on this difficult subject. Erb, Fournier, Gowers, Dowse, and Banks are the avowed partisans of the etiological connection between tabes dorsalis and syphilis; while Althaus, Lancereaux, and Gull maintain that tabes dorsalis and syphilis are coincident only, but not correlated. Thomas Buzzard, who had formerly included progressive locomotor ataxia among the nervous affections belonging to the tertiary stage of syphilis, has now shifted this pronounced position. He still acknowledges the fact to be incontestable that there is a remarkable frequency of association between the two affections, but thinks that the time has not yet come to draw safe inferences as to the precise nature of the relation.

This divergency of opinion teaches us that the question is still an open one, and that the record of well-observed facts which will contribute to the solution of the problem must be of interest to the medical profession.

I hope that the history of the following case may deserve your kind attention.

Merchant, S., 39 years old, applied to me, for the first time, May 3, 1877, on account of catarrhal affection and slight asthenopic troubles of his eyes. There was manifest hyperopia of $\frac{1}{10}$ and vision $\frac{12}{10}$ in either eye. Appropriate treatment and the use of suitable glasses effected in a short time a perfect cure.

Patient presented himself again October 28, 1878, this time with a slight paresis of the left external muscle. The limitation in motion was hardly perceptible, and the diplopia could fully be corrected by prism 10°, base outward. Vision in each eye was $\frac{12}{12}$, with manifest hyperopia of $\frac{1}{60}$. Field of vision and background of the eyes were normal. Left pupil showed normal condition. The right pupil was contracted, reacted very feebly under bright light, but promptly under efforts of accommodation and associated movements of the eyeballs. Repeated instillations of atropia dilated the pupil only slowly and only in the medium.

Patient, a robust and stout man, attributes his present eye-trouble to a bad cold he had contracted a few weeks before. His stomach has since been out of order, and he has suffered from flying rheumatic pains in different parts of his body.

The tongue was slightly coated, and there was some pain over the stomach-pit. Functions of the bowels and the bladder were normal, and sexual appetite was in full vigor. Closure of the eyes did not reveal any symptoms of muscular incoördination. Syphilitic affection was emphatically denied.

A few applications of the galvanic battery, in conjunction with the use of hot vapor baths, effected a rapid cure. There was no trace left of the paresis, and the general condition also seemed to have been greatly benefited by the treatment.

I lost sight of the patient for three years and a half, when he applied to me again, May 7, 1882, so changed in look and appearance that I could scarcely recognize him at first. His sad tale was as follows:

His health was good in the winter of 1878–79. In May, 1879, he began suffering from his throat, with difficulty in swallowing, so that for a time only liquids could be consumed. The cervical glands were also highly swollen. This complaint passed off under treatment, and he enjoyed three months of rest, when gastric disorders set in, which, rapidly increasing, brought down the weight of his body from one hundred and ninety-five to one hundred and thirty-five pounds. Dyspepsia was extreme, and constipation could only be overcome by the most heroic drastics. Attacks of gastric spasms were regularly repeated every evening, followed

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by chills and consequent profuse perspiration. Quinine, bismuth, and nitrate of silver were alternately used, without producing any material change in the condition of the patient, who began to improve spontaneously in June, 1880, regaining his former health and strength in a very short time. His weight increased within six weeks to one hundred and seventy pounds, and reached two hundred and six pounds in the middle of October. In the first days of November inflammation of his right knee-joint developed, with moderate swelling of the parts, but with excessive pains, which were worse at night. Shortly after the use of iodide of potassium had restored health, the same affection set in on the ankle, to pass away spontaneously within two weeks. He now remained perfectly well until the spring of 1881, when the old gastric trouble reappeared, associated with rheumatic pains in the back and the lower extremities. The sexual appetite abated, and in the middle of August patient first noticed a sensation of cold and formication in the lower extremities, and of numbness and tingling in the soles of his feet. The morbid symptoms were most marked in the left limb, which felt heavy and was the frequent seat of fulgurating pains. Besides, there was a constant sensation like that produced by a faradic current. His physician declared the case to be one of tabes dorsalis, which diagnosis was corroborated by other physicians. Electricity, ergot, bromide of potassium, warm and cold baths, were tried without any effect. In December patient noticed the first symptoms of impairment of vision in his right eye. The latter lost the power to read near by the usual point, while it could readily distinguish distant objects as well as before. This disturbance, however, passed off without any medical aid, and the eyes remained healthy until February, 1882, when vision began to fail in both eyes. He resorted to glasses, which he had to change six times within three months. At last he was sent by the optician to an oculist, who treated him with subcutaneous injections of strychnia and with artificial leeches applied to the temples. Vision was not improved by the former, and was greatly impaired by the latter, procedure.

General examination showed complexion sallow, eyeballs sunken, muscles flabby, the whole body emaciated, depressed white circular cicatrices, surrounded by a ring of brown pigment, on the left tibia and ulna; smooth white scar near the frænum preputii; tendinous, longitudinal cicatrices on the back of the pharynx and on the soft palate; tongue slightly coated, breath foul, lymphatic glands not enlarged. Pressure along the spine does not produce any painful sensation. Cutaneous sensibility of the head, trunk, and the upper extremities not abated. Pinching with a pin on any point is instantly felt and very promptly localized. Motor power of the arms absolutely normal. The grip too strong to be borne. Writing is correct. The lower extremities can feel and localize fairly, but there is already a slight diminution in the tactile sensibility, with retardation of the sensation of pain, which phenomenon is most marked in the soles of the feet. Muscular sensation and motor power are not affected. Plantar reflex feeble; patellar-tendon reflex totally abolished. Gait jerking, but walking is done without the help of a cane. Erect position is maintained for only a short time, with the legs kept apart; after a little while the body begins to totter and to swing from side to side. Standing and walking with closed eyes are highly uncertain; the body is swayed to and fro and has a tendency to fall to the left side. The same insecurity and tendency to fall to the left are experienced when the patient is ordered to turn around rapidly.

The subjective complaints are heaviness and weakness of the limbs, with the sensation of cold in the latter and of numbness in the soles of the feet; sensation of formication and of pricking in the index finger and thumb of each hand; lancinating pains in the lower extremities, with constant dull pain in the back; feeling of intense constriction around the body. Standing and walking in the dark are very difficult, and stumbling is very frequent. On rising in the morning, patient experiences great difficulty in using his limbs and arms, and he only gradually gains the power over them. Bowels are costive; sexual appetite is extinct; there are slight noises and murmurs in the ears. Mental capacities are not impaired; sleep and appetite are good; digestion is fair; urine normal; speech is distinct; no difficulty whatever in swallowing; weight, one hundred and forty-five pounds.

Examination of the eyes and ears showed right pupil *extremely* contracted; it does not react at all under bright light, and reacts scarcely perceptibly under efforts of accommodation and upon movements of the eyeballs. Left pupil contracted and motionless under bright light; it reacts very slowly under efforts of accommodation and upon movements of the eyeballs. Intraocular pressure and sensation of colors normal.

Vision of the right eye $\frac{1}{30}$, of the left eye $\frac{1}{10}$. In the right eye the visual field is greatly narrowed in its upper half; in the left eye it is peripherically limited in the upper inner quadrant. Either optic disk is whitish in the temporal half and has a slight reddish hue in the nasal one. The papillary limits are distinct, the vessels normal. Auricles show longitudinal cicatrices. Tympanic membranes are somewhat flat and slightly opaque. Right ear hears whispering at fifteen feet, left ear at ten feet distance. Eustachian tubes are permeable.

Patient now confessed having contracted a chancre in the spring of 1868, followed by

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constitutional symptoms, which got well within six weeks under the use of pills. He remained perfectly well until the fall of 1869, when his glans became sore again and a cutaneous eruption appeared on the chest and auricles, which, however, passed off almost without treatment. In the summer of 1871 he suffered, to judge from his description, probably from syphilitic periostitis of the left ulna and tibia, with tuberculous ulcers on the latter and with contracture of the index. Treatment with iodide of potassium continued for a longer period brought about perfect recovery. He married in the spring of 1873, with the full consent of his physician, who considered his constitution freed from all syphilitic poison. His wife presented him in due time with a healthy boy, who, however, died from a pulmonary disease when two years old. No other children were born. His health remained perfectly normal until October, 1878, when he came for the second time under my treatment for paresis of the external muscle of his left eye.

My treatment consisted in mercurial frictions with the gray ointment, of which one drachm was rubbed in every evening. Besides, patient had to gargle and cleanse his gums and mouth very frequently during the day with a solution of chlorate of potassium.

Improvement set in from the tenth day of the treatment, at first with subjective conditions of the patient, but very soon the morbid symptoms passed. He regained flesh and color, and with it his former gay disposition of mind. After the twentieth friction he told me, greatly elated over the fact, that he had had a voluptuous dream during the night, with erection of his penis and ejaculation, which had not happened since the beginning of his constitutional affection.

After forty frictions had been used, the condition was as follows:

Vision of either eye $\frac{12}{12}$. Visual field in the left eye absolutely normal, and only slightly limited in the upper peripheric parts in the right one. Left pupil regular; right pupil slightly contracted and of feeble reaction. Optic disks whitish in the temporal half and reddish in the nasal one.

The right ear hears whispering at twenty-five feet, the left ear at eighteen feet distance. Subjective noises have abated.

Complexion healthy. Muscles firm. Flesh greatly improved. Cutaneous sensibility and sensation of temperature in the lower extremities, plantar reflex and patellar-tendon reflex perfectly restored. Patient walks with a steady and firm gait, turns around rapidly with the greatest ease, has no trouble whatever in the dark, stands in the erect position without the least oscillation of the trunk, walks and even runs a short distance with closed eyes without deviating from the straight line. All other morbid symptoms and all morbid sensations have entirely vanished. In fact, we should consider the patient restored to perfect health, were it not for a peculiar sensation he still experiences in his left leg and in the ulnar region of his left hand,—which sensation he can only describe as the consciousness of possessing the respective leg and fingers, which he has not on the right side.

Iodide of potassium, to which I now resorted, did not agree with the patient, and I had to give up its use after a few days. The treatment, however, with the fluid extract of sarsaparilla in order to induce perspiration, was very well borne, and greatly helped to remove the last traces of the disease.

When I discharged patient from the treatment, August 29, the condition was as follows:

General constitution normal. No morbid sensation whatever. Virile power restored. Weight, one hundred and seventy pounds. Vision of the right eye $\frac{12}{15}$, of the left eye $\frac{15}{15}$. Manifest hyperopia $\frac{1}{60}$. Limits of the visual field above the average. The right pupil is slightly contracted, the left pupil has normal shape. Reaction on light in either eye normal. Optic disks whitish in the temporal half and reddish in the nasal one. Each ear hears whispering at thirty feet distance. No noises.

My last examination, made April 15 of this year, showed no change in the condition of his general constitution and of his eyes and ears. Patient is able to walk, to leap from a car while in motion, and to ride on horseback with the same ease as in his former best days.

NOTES OF HOSPITAL PRACTICE.

HOSPITAL OF THE UNIVERSITY OF PENNSYLVANIA.

CLINIC OF WILLIAM GOODELL, M.D., PROFESSOR OF CLINICAL GYNÆCOLOGY IN THE UNIVERSITY OF PENNSYLVANIA.

Reported by WILLIAM H MORRISON, M.D.

CYST OF THE BROAD LIGAMENT—TAPPING.

GENTLEMEN,—This girl is 20 years old. Four years ago an abdominal tumor made its appearance and gave a little pain. She was before the class one year ago, on November 5, 1880, at which time she was aspirated. I then held out strong hopes that it would not return.

Here is the fluid that was removed. It is slightly opalescent, perfectly limpid, looking like water; and from this fact I was inclined to think that it would not return. The character of the fluid made me believe that this was a cyst of the broad ligament: that is the only fluid that we get from abdominal tumors which is perfectly limpid. Here is another example of

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fluid from a cyst of the broad ligament, tapped April 8, 1881. This is still more limpid. We cannot distinguish the difference between it and spring-water. Allowed to flow into a bucket, we should see the cracks in the bottom magnified.

Here is a similar fluid obtained in 1874. This is also limpid. Here is one removed October 6, 1880. In this there is a little sediment of blood, due to the wounding of a vessel by the aspirator.

When we have a fluid like that removed a year ago from this tumor, our duty is to await developments. If ovarian, in nine hundred and ninety-nine cases out of a thousand, I might say, it will refill. It is said that ovarian tumors are cured in this way; but the truth probably is that the physician has mistaken a cyst of the broad ligament for an ovarian cyst. Cysts of the broad ligament often will not return after tapping, or, if they do, a second tapping usually cures them. In this case the cyst has refilled in one year and one month. The color of ovarian fluid varies in different cases, and sometimes in the same case; for you may get fluid of different characters from different cysts. Sometimes in a small cyst the fluid will be quite clear.

Here is an ovarian fluid removed in February, 1878. On examination it was found to contain the ovarian cells.

Here is another example of ovarian fluid. This is from a lady who had a tumor that had been examined by a great many physicians, who said that it was fibroid tumor of the womb. She had been tapped thirty times. I saw her with Dr. Agnew, and we made the diagnosis of subperitoneal fibroid tumor. The tumor had a pedicle, and I decided to operate to see if it could be removed. I found it to be a solid tumor of the ovary, the first that I had removed; that was in 1876. Since then I have removed two. The error in diagnosis was perfectly warrantable; for it is often impossible to distinguish between a subperitoneal fibroid tumor and a solid ovarian tumor.

The woman from whom this was obtained practically committed suicide. I operated in the old way, with the clamp. She did very well for twelve days. She was strictly enjoined not to get out of bed, but she became restless, and, while the nurse was sleeping and her daughter was watching, at eleven o'clock at night, she slipped out of bed to pass her water. When she attempted to go back, she was seized with a violent pain and could not get in bed. Her daughter could not lift her, as she was a heavy woman, and, as she was afraid to awaken the nurse, she called the cook, and they put the woman to bed. In two hours they had to send for a physician. I was telegraphed for, and reached her house at seven o'clock in the morning and found her dying. In the act of getting up, the pedicle, which was but slightly attached to the abdominal walls, had undoubtedly been torn loose, and there was an effusion of blood into the abdominal cavity, followed by rapid collapse.

I shall first examine this tumor, and then I shall remove the fluid. I find fluctuation very marked, with dulness on percussion. We cannot decide between a cyst of the broad ligament and an ovarian cyst except by the character of the fluid. I was perhaps wrong in holding out too strong a hope that this would not return. This is the fifth case of cyst of the broad ligament which I have tapped, and I have been obliged to remove only one of them: this was a bursting cyst.

A patient with a bursting cyst will stoop over to lift an article, she feels something give way, has a little pain, has to go to bed for a day or so, and passes a little more water than usual. This is the usual history. The fluid in such cases is so bland that it produces very little irritation. Sometimes it is necessary to give an opium suppository.

I want to show you now how to tap and give as little pain as possible. Take a lump of ice, put it in a napkin, and then make a freezing mixture by rubbing it in salt. Then place it over the point at which you wish to tap; make firm pressure, and in two minutes the skin will be so frozen that she will not feel any pain when the trocar is passed. The proper point for operating is in the linea alba, between the umbilicus and the symphysis.

There are certain dangers from tapping, even with the aspirator. The trocar may hit a vessel in the abdominal wall, or it may hit a vessel in the cyst-wall. We take the linea alba because it contains no blood-vessels. In a woman who is largely distended by a cyst the recti muscles are separated to such an extent that we have a linea alba of large size.

If you have hemorrhage from a vessel in the abdominal wall,—internal hemorrhage,—how do you stop it? By passing beneath

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the vessel an acupuncture-needle and tying around the needle a ligature for a few hours. When the hemorrhage comes from a vessel in the cyst-wall it is more dangerous, as you cannot get at it, and in such cases it is sometimes necessary to perform the operation in order to stop the hemorrhage. I have never had serious hemorrhage after tapping, but in one case hemorrhage produced a peritonitis, from which the woman recovered. When the tumor was removed, I found a clot of blood about the diameter of a twenty-five-cent piece and about as thick.

The skin is now sufficiently frozen, and I shall pass the trocar of the aspirator into the cyst. The advantage of this instrument is that we do not get any poison-germs inside of the cyst and we do not get inflammation of the cyst, or at least the danger is very slight. The old-fashioned way of tapping with the trocar was one in which germs from the outside were very apt to get into the cyst, and when they once get in they set on foot inflammation of the cyst, with profound constitutional symptoms requiring the immediate removal of the tumor, and of course under such circumstances the chances of success are not nearly so great.

I have on three occasions removed cysts in which the cyst-wall had broken down and the contents had become purulent. In one of these the inflammation had followed the removal of the fluid by aspiration. In that case the operation was successful. The other two cases had been tapped in the old-fashioned way and were in the last stages of septicæmia: neither of these recovered.

We are going to give this girl this chance, but if the cyst refills we shall remove it. She is very anxious to have it removed. There is no earthly use in giving remedies by the mouth. There is no diuretic that will cause absorption of a fluid enclosed in a cyst-wall: all that we can do is to trust to nature.

What is the difference between an ovarian cyst and a cyst of the broad ligament? The name ovarian tells the story: it is a cyst of the ovary. Perhaps one of the Graafian follicles, instead of bursting in the normal way and passing through the Fallopian tube into the womb, takes on an abnormal growth, and as it gradually enlarges it extends to the other follicles, until the whole ovary is involved. In this way we explain the large mother cyst and the smaller or daughter cysts. This is the reason why we so rarely find a monocyst of the ovary.

Cysts of the broad ligament are much more rarely met with. There is in the broad ligament a set of little tubules, the remains of a fœtal structure, the object of which we do not know. In a cyst of the broad ligament, one of these tubules has probably become enlarged and cystic. These are retention cysts, and are usually monolocular, although it is said that they may be multilocular.

There is another little cyst which occasionally occurs. I have no doubt that many of you have found on the fringe of the fimbriated extremity of the Fallopian tube a little jelly-like globule. I am disposed to think that these become cysts, that they never attain a very great size, but burst when small. I have a lady under my care who every six or eight weeks will develop one of these little cysts. It becomes enlarged and suddenly bursts. One day, while I was examining her, it broke; she had pain, became pale, and had to lie down for a while. I do not think that these are cysts of the broad ligament, or of the parovarium, but that they are these little cysts found at the extremity of the oviduct.

You notice the fluid that has been flowing while I have been talking. It is not as clear as that removed a year ago. It is a little dark in color. I am afraid that she will have to come back. If it had retained its clear color I should have been in hopes that it would not return.

Cysts of the broad ligament are not, as a rule, difficult to remove. They do not often have adhesions to the surrounding parts; but they are sometimes enveloped in the whole broad ligament, which makes them somewhat difficult. Under such circumstances, we are warranted in leaving a portion of the cyst behind. A few years ago it was the custom never to remove a cyst of the broad ligament, but to cut down on the cyst, remove a piece of cyst-wall about the size of a fifty-cent piece, and return the sac, relying on the peritoneum to absorb the fluid that would be secreted, and on the collapse of the walls for the obliteration of the cyst. After this operation some patients recovered; but as ovariotomy became more and more safe, the whole tumor was removed whenever it was possible to do so.

This girl tells me that her employment

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compels her to stand on her feet a great deal, and that she has a constant desire to pass her water. We can easily understand how this tumor pressing upon the bladder would cause flattening of its walls.

I shall now remove the canula, compressing the opening with my fingers, and then apply a strip of adhesive plaster. She will be put to bed for forty-eight hours, simply as an act of prudence. It is possible that she might go home at once, but if inflammation should occur we might have to remove the tumor within a few hours. I do not put on a binder, for if I did so I might squeeze some of the fluid into the cavity of the abdomen. In a case of this kind it would, perhaps, cause no trouble, but in an ovarian tumor it would be apt to produce inflammation.

I have removed seven pints of fluid. You can compare this with that previously removed. I shall ask Dr. Formad to examine this carefully to see if he can find the ovarian cell; but I do not think that he will find them in a fluid so limpid as this.

Now, gentlemen, there are certain axioms in regard to tapping.

In the first place, always tap in the linea alba, because of the freedom from blood-vessels and important organs.

Secondly, always aspirate in preference to tapping with a trocar and canula.

The third rule, and the one which I consider the most important rule of all, is always to empty the cyst when you tap. This is a blunder that physicians sometimes make; they take only a little fluid away; particularly if they wish it for microscopic examination, they will withdraw only a hypodermic syringeful. What is the result? There will be a constant oozing from that opening, and, as a consequence, peritonitis may be set up, and the patient die within forty-eight hours. That has happened on a number of occasions.

The fourth rule, another good one, and one which I am beginning to appreciate the importance of more strongly, is never to tap or use the aspirator when a tumor presents a great deal of solidity. In such case it is justifiable to tap only when the patient insists on it. Sometimes the patient will not permit the medical operation, but will insist on being tapped. Under such circumstances it may be proper. The danger is that if the cyst contain a great deal of solid matter you will be able to remove only a small quantity of it, the cyst-wall will not collapse, and there will possibly be oozing of the contents into the peritoneal cavity.

PELVIC PERITONITIS.

Here is a patient who came in yesterday. I have not yet seen her. Let us try to find out what is the matter.

Q. How old are you? *A.* Twenty-two years.

Q. Are you married? *A.* Yes.

Q. How long? *A.* Two years.

Q. How many children have you had? *A.* None.

Q. Why did you come here? *A.* On account of inflammation of the womb.

That is not the answer I wish. She says that because some of her friends or her physician have told her so.

Q. What symptoms have you? *A.* I have pain in the bottom of my stomach, and it feels as if all my insides were coming out. It is only when standing that I feel that.

Q. Are your monthlies regular? *A.* Yes, but very painful.

Q. Do you lose much? *A.* Yes.

Q. How many napkins do you use? *A.* Four or five a day for the first three days, one every day afterwards.

The proper word to use is "guards;" but I did not use it, for she might not have understood me if I should have asked, "How many guards do you use?" Four a day for three days would make twelve: that is too much flow. She tells me, further, that she does housework; that she has been losing flesh for the last week, and has been sick in bed on account of her pains. I am under the disadvantage of not seeing her face (as it is covered by the sheet), for a great deal may be learned from the countenance.

Q. Do you have a good deal of pain in passing water? *A.* Yes.

Q. Do you have much discharge? *A.* I have terrible discharge from the womb.

Q. Do you make water often? *A.* I feel like passing it all the time.

I will tell you what passes through my mind: it is that we have here a pelvic peritonitis,—a localized peritonitis of the broad ligament, in which are situated the tubules of the parovarium of which I have spoken. The products of the inflammation press on the neck of the bladder, causing trouble when she passes water, and also a constant straining.

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What is the significance of the discharge? She has had it for more than a week. It is possible that this is specific, but it is very difficult to tell whether it is specific or whether it is an acute attack brought on by causes of which we do not know.

I shall now examine her and see what I can discover. My diagnosis in regard to pelvic peritonitis is correct. I find that the womb is not entirely immovable, but its motion is very limited, and the slightest movement gives her pain. What has caused this? It is due to the lymph which has been thrown out by the inflammatory process.

An excellent analogy is represented by a ship at anchor. A ship at anchor moves with every current, it moves in every direction, but its motion is limited by the anchor. The womb is anchored in the pelvis. It has a certain amount of movement for the purposes for which it was intended. In every act of coition, in every inspiration, in every movement of the body, there is a corresponding movement of the womb. The womb is lying at anchor; but a cold night occurs, the water is frozen, and the ship is no longer movable. A peritonitis occurs, and, instead of ice, plasma is thrown out, the layers of the broad ligament are thickened, and the womb is no longer movable. It feels as though melted tallow were poured around the womb. Just as tallow could be indented, so I can make an impression on this plasma. As I pass my finger around, I find that the roof of the vagina is hard. On the right side the condition is more marked than on the left. On examining the vagina there is a greenish-colored discharge, but that does not enable us to say that it is specific, for I have on another occasion, while making an application of saturated tincture of iodine to the womb, dropped some in the vagina and have had as a result a severe vaginitis with this same-colored discharge. (The patient was now removed.)

But, as this discharge is not a necessary accompaniment of peritonitis, it is my opinion that the disease began in the vagina, and passed up through the womb and Fallopian tube into the abdominal cavity, causing peritonitis. I am by no means prepared to say positively that this is specific, although I am of the opinion that it is. In other words, I believe that she has been infected,—that she has a gonorrhœa which has gone through the womb and Fallopian tubes, causing the peritonitis. If I were called before a judge I would not swear to that. I was very glad on one occasion to be able to say that I could not decide from the character of the discharge. I was once called to see a very irate and indignant wife who had a trouble of this kind, and she accused her husband of giving it to her. She asked me if she had not caught it from her husband. I told her, "It is impossible for me to tell from the character of the discharge whether or not it is specific, and, as your husband says that he has no disease, I cannot say that it is specific." I shall never forget that woman, walking backwards and forwards like an infuriated bear. I felt it my duty to shield the husband, as he had made a confidant of me, but he deserved a flogging, for he had a nice wife and three or four children.

I have spoken plainly to you; but I shall not mention gonorrhœa to this woman or her husband, for, suppose the husband is a chaste man, he immediately suspects his wife. I may be mistaken. The best plan is to hold your tongue quiet and not to seek for confidences.

If I am correct in my inferences, this woman will probably remain sterile. This is the reason that strumpets do not conceive, for there are very few of them who have not had gonorrhœa, and it has extended as I have described, covering the ovaries with a layer of lymph. The Graafian follicles are no longer able to pass out, and they are no longer grasped by the fimbriated extremity of the Fallopian tube. A physician in New York has written a paper in which he states that such cases always remain sterile; but I have seen undoubted cases of gonorrhœa, followed, as it almost always is, by peritonitis, which ultimately became pregnant.

This case is interesting to you, for, although you may not have many cases of gonorrhœa coming before you, you will have cases of peritonitis from other causes. It may follow an application to the inside of the womb, the introduction of the sound or a pessary, or a woman will have a miscarriage, catch cold while menstruating, or in some vulnerable cases it may follow a ride over a rough road.

What is the treatment? My advice is to lay all small doses to one side and treat the case heroically.

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In the first place, give as much morphia as is necessary to relieve the pain,—if you choose, a hypodermic injection of morphia at first; but I prefer the use of opium by the rectum. I never give less than one grain of the aqueous extract of opium. It is a very good plan to add belladonna by the rectum; but do not put it in the same suppository as the opium. Belladonna is very good for the urinary tenesmus, and it also has an effect in lessening the inflammation. You have to push the opium, but cannot push the belladonna. I also give large doses of quinine, giving in bad cases ten grains every four hours until the patient is completely cinchonized and is deaf. I next put a large poultice of flaxseed or corn meal over the abdomen. If this is covered with rubber or a piece of brown paper greased with lard, it will keep moist and warm for twelve or twenty-four hours, for the rubber or greased paper retains the heat, and the temperature in these cases is always elevated, running up to 103° or 104° in the evening and down to 101° in the morning.

After you have passed the brunt of the disease you must begin to use blisters. In this case the worst is passed, but her temperature is, I am sure, not under 100°. I shall blister her. How shall we blister? Here is a woman who has strangury to a certain extent, and you do not wish to apply a blister that is going to increase the trouble. I always use the cantharidal collodion. I shall paint a blister in this instance three by four inches, putting on three or four layers, and then at once put over this a poultice. This is an almost painless way of raising a blister. I have never seen it produce strangury.

Now, gentlemen, in a case of frank inflammation, such as that produced by a sound, where there is nothing of a concealed character, this treatment will subdue it; but if the peritonitis is produced by sponge tents you have a bad case to treat.

I am sometimes called in consultation to a case of peritonitis by some of my students, and they tell me, "I am giving quinine just as you direct us. I am giving two grains every three or four hours." That is nothing at all. You should never give less than five grains.

You will find certain nervous symptoms present. The woman will be weak and trembling, ready to burst out crying. In such cases I very often give large doses of the bromides, from sixty to one hundred grains in the twenty-four hours.

If you treat your cases in this heroic way, you will, in the great majority, cure them at the very beginning of the disease.

TRANSLATIONS.

TREPHINING FOR HEMIPLEGIA AND EPILEPSY OF TRAUMATIC ORIGIN.—Dr. Demons read before the Société de Chirurgie a report of an unusual operation. A man had two years before fallen upon his head and received a scalp-wound on the right side; he was unconscious for a time, and subsequently he had frequent headache and a crossed paralysis of the left arm and the right leg, which persisted for five months. He then became well, and remained so until last April, when he had an outbreak of epilepsy, the convulsions recurring every fifteen minutes for five or six days; he then became hemiplegic of the entire left side; his intelligence was also obscured.

In the absence of any local indication of depressed fracture, the site of the operation of trephining was selected opposite the middle of the fissure of Rolando. The periosteum being lifted up, a fracture was detected about an inch long; upon this the crown of the trephine was placed. The dura mater was slightly thickened; in the arachnoid he found and removed a small tumor formed by a hard substance; the subjacent cerebral surface was a little roughened. Following the operation, the hemiplegia and convulsions disappeared; there only remained some loss of tactile sense in the left hand, which had persisted since the accident. Success was attributed to antiseptic measures and closure of the wound.

In the discussion, M. Lucas Championnière said that cases of trephining where there is nothing to indicate the site of the lesion on the surface of the cranium are rare, and that the above is therefore an instructive case: he believed that the operation, however, was indicated, even had a fracture of the skull not been found. He also referred to a case of trephining for traumatic epilepsy, nine years ago, in which the cure had been permanent.—*La France Médicale*, No. 66.

THE DANGER OF FAT EMBOLISM AFTER RESECTION OF THE KNEE.—Dr. P. Vogt,

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of Greifswald, in a communication to the *Centralblatt für Chirurgie* (No. 24), refers to a case of fungous arthritis of the knee-joint in a girl 12 years of age, in which resection was performed, but the patient died in twenty-four hours, the autopsy showing that fatty embolism of the lungs was the cause of the fatal collapse. At the time of the operation the bone was found to be very fatty; after the section some pressure was unavoidably made upon the end of the femur in straightening the knee, and the wound was closed after the operation. The author in such cases recommends that no pressure shall be made upon the ends of the bones, and that the discharges shall be allowed free vent; where this cannot be obtained, and there is much fatty degeneration of the bone-structure, he believes that amputation would be preferable.

In this case of fatty embolism the temperature was sub-normal; in other cases reported it has been higher, but this, the reporter thinks, is attributable to an intercurrent pneumonia; and a case also is reported in which this condition under discussion was associated with miliary tuberculosis and a febrile temperature.

RADICAL TREATMENT OF A FORM OF HYSTERIA. — In place of Baker Brown's operation of clitoridectomy for hysteria depending upon masturbation, Prof. N. Friedreich arrives at the same results by deep cauterization of the clitoris and nymphæ with nitrate of silver. In eight cases in which this was carried out, the results were surprising. Although the greater part had been affected by contractures or neuralgic phenomena (in one there was complete paralysis, with aphonia), the success was complete, after the failure of other modes of treatment. In the majority of the patients masturbation seemed to have been the cause of the disorder. Following the treatment there was no disturbance of the menses: indeed, in one case they became more regular than before.—*Virch. Archiv.*

LAPAROTOMY IN IRREDUCIBLE UMBILICAL HERNIA IN AN INFANT.—Dr. G. Pagenstecher operated upon an infant, twenty-four hours old, for a large umbilical hernia, which required incision previous to reduction. Antiseptic precautions were adopted, but no spray was used. Although the peritoneal cavity was opened, the little patient made a good recovery, the greater portion of the wound uniting by first intention.—*Bull. Gén. de Thérap.*, July 15.

SPIDER'S WEB AS AN ANTIPERIODIC.—Dr. Oliver, having given spider's web in eighty-three malarial cases, concludes—first, that it can cure intermittent fever of quotidian or tertian type; second, the dose for an adult is thirty grains; third, it is less prompt than quinine, and therefore should not be employed in grave cases; fourth, it has a more pleasant taste than quinia; fifth, relapses are less frequent.—*Bull. Général de Thérapeutique* (July 15), from *Zeit. d. a. ö. Apoth. Vereins.*

CANCER OF STOMACH SIMULATING PERNICIOUS ANÆMIA.—The clinical observation that some cases of pernicious anæmia are in reality due to cancerous disease of the stomach-walls is well illustrated by Dr. Richard Neale by the report of the following case (*Practitioner* for July). The symptoms complained of by a gentleman, 61 years of age, were anæmia, debility, and dyspnœa on exertion; there was no emaciation, and there was entire freedom from pain. The only gastric symptoms detected were distaste for food, indigestion, flatulence, and, on one occasion, the vomiting of a fluid like currant-jelly. The temperature was 102°; subsequently the morning temperature fell to 97.8°, but it was generally normal or sub-febrile. Death occurred from progressive weakness in about ten months. At the autopsy the posterior surface of the stomach was found to be involved in a soft, cancerous mass, breaking down readily under the finger. The disease encircled the œsophageal opening, but did not extend around the pylorus. The vomiting of currant-jelly substance at the commencement of the disease was the only positive objective symptom of gastric cancer. The singular deficiency of symptoms of local organic disease was supposed to be characteristic of the softer characters of cancer, the pressure of scirrhus upon surrounding structures being more intense and being more likely to cause local disturbance and pain.

NATURE VERSUS ART. — Dr. Cory, of St. Thomas's Hospital, says the *Medical Press*, entertained the view that inoculation from a true Hunterian chancre is not possible. He therefore submitted himself to experiment with a view to testing the theory. After four times failing of success, he at length succeeded, a hard chancre on the arm being the result. Notwithstanding that the sore had been cut out, secondary and tertiary symptoms have followed in due course, and now, we regret to say, Dr. Cory is wholly incapacitated from regular work.—*Louisville Medical News.*

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PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, AUGUST 25, 1883.

EDITORIAL.

MARRIAGE FROM A MEDICAL STAND-POINT.

THE venerable editor of the *Journal of the American Medical Association*, in a recent issue, propounds the startling query, "Do moral principles change? Are they subject to the Darwinian law of evolution?" Although this important question is unanswered, it is left to be inferred, since it was raised in connection with our Code of Ethics, that it is not within the province of any State medical society to invalidate the Decalogue or to rescind the moral law as it applies to the relations existing between members of the profession or between the profession and the public. Since this point has been satisfactorily settled, it may be as well for a moment to extend the application of the query,—Do moral principles change? Is there one code of morals for physicians, for instance, and another for surgeons, or, let us say, one for general practitioners and another for specialists? Take gynæcology for example. A writer in the *American Journal of Obstetrics*, in discussing a case of chronic invalidism in a neurotic and hysterical young girl, weak in body and mind, concludes, after consultation, that the only remedy that remains is—marriage! As all others have failed, this must be the panacea. Without a word of sympathy for the unfortunate individual who is to take this forced card in the hymeneal lottery, or without apparently a thought as to the possible unfitness of such a mental and physical wreck for undertaking the duties of wife and mother, the recommendation is given, and marriage is to be tried like any other therapeutic expedient. Failure may mean domestic misery and unfaithfulness for the husband, but marriage from a medical stand-point has consideration only for the patient: the husband is left entirely out of the question. We think, however, that in such a case, unless moral principles have changed, the physician has incurred a grave responsibility. Would he willingly consent to have his own son unite his life with such wretchedness? Let us take a surgical illustration. A young man acquires syphilis. Coming into skilful hands for treatment, one of the questions he is sure to ask is, "How soon can I safely marry?" It is not proposed that the young wife or her family should be informed that the husband has a syphilitic taint. Not at all. That would violate professional confidence. It is equally useless to suggest that the patient find some young woman who has been afflicted in like manner with himself, with whom he could unite on equal terms. No; that is not at all his idea; he wishes to marry in his own set, perhaps some bright and pure young girl, respected and loved by all who know her, because a reformed rake is said to be very particular in this respect. What is the duty of the physician? Shall he give his consent to such an unequal marriage, even if two years of penance under mercury have been offered to atone for previous excesses under Aphrodite? Unless moral principles have greatly changed, he cannot recommend any such union. His own daughter he would shield from such a marriage. Can he consistently sacrifice another on such an altar?

In a recent issue of a most respectable medical journal, a contributor, speaking of the treatment of inveterate masturbation and spermatorrhœa, said that he had occasionally sanctioned the immorality of a mistress; and the same recommendation, within the writer's knowledge, has been repeatedly given in a public clinic by surgeons, in the presence of large numbers

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of young men. In the same class of cases marriage has also been urged by other medical authorities. Moral principles must certainly have sadly changed if medical authorities can advocate such doctrines without question or comment from the profession.

Unless expediency has taken the place of justice, falsehood of truth, and wrong and right have become convertible terms, we beg to answer the query at the beginning of this article in the negative.

THE ELECTRIC LIGHT IN MEDICINE—A NEW BATTERY FOR ILLUMINATING PURPOSES.

MANY efforts have been made since the general introduction of the electric light for domestic illumination to adapt the same principle to laryngoscopy and similar purposes. The polyscope and other sources of illumination were readily devised, but thus far there have been found practical difficulties in the way of obtaining the required supply of electricity. The storage battery of Trouvé apparently met all the requirements for medical purposes, and was at once called into service; unfortunately, it was found to be unreliable and uncertain in its action, and its use was found to involve a loss of from forty to sixty per cent. of the electrical energy. Although this apparatus, in spite of its disadvantages, has been utilized in medicine to a certain extent, yet the attention of inventors has been constantly directed to a better source of electricity. For the recently-invented illuminator of Helot and Trouvé, the electricity is derived directly from a cell of peculiar construction; and we observe that a similar one has been invented in England for this purpose, although the details of its construction have not yet been made public. A correspondent of the *Lancet* announces that a patent has been granted to Mr. James Gray, of Gateshead, for a portable battery, for which extraordinary claims are made. It is described as contained in a neat ebonite box, three and a quarter inches square by six inches high, divided by partitions into four compartments or cells. It is carried by a leather strap, and is about as handy and portable as a carriage clock. It is claimed that it will keep a three-candle incandescent lamp at full illuminating power for ten hours without requiring to be touched, or keep four inches of platinum wire at a white heat. The statement is also made that it will drive a Gramme ring producing a motive power of two hundred foot-pounds at the rate of two hundred revolutions per minute for six hours, at a cost for materials of one shilling. The correspondent speaks of this as an electrical marvel; and certainly, if the claims made for it are not extravagant, it will be a great acquisition to medicine. Unfortunately, it is the fate of new inventions to be introduced by enthusiastic advocates. In this case we hope that further experience may only confirm the claims of the inventor.

SUGGESTIONS FOR IMPROVED WATER-SUPPLY.

NOW that the Board of Health has taken steps to abolish the few remaining street-pumps in the thickly-settled parts of the city, we hope that those in daily use in the cemeteries will not escape. Neither the drainage from cesspools nor that from dead bodies can be called a desirable addition to our drinking-water. If a few sewers, that now empty into the Schuylkill, could have their contents diverted into reservoirs where they might be rendered innocuous by the use of chemical agents, the drinking-water of this city would be very much improved, especially if no more cemeteries are established along the banks of the river.

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LEADING ARTICLES.

NAPHTHALIN.

A NUMBER of communications have appeared within the last few years commending the use of naphthalin in surgery, both as an active antiseptic agent and as a convenient and efficient dressing for wounds. It has no poisonous action upon higher animals, but is very destructive to insects, infusoria, and all kinds of germs. Being cheap, clean, and easily obtainable, it has been largely used in hospital practice in some of the larger institutions in Germany, especially at the Strasburg Clinic, and with results which warrant its more extended employment.

Naphthalin is a coal-tar product, discovered by Garden in 1820. It is a white, crystalline body, a hydro-carbon (formula $C_{10}H_8$), in many respects resembling camphor. It is inflammable, insoluble in water, evaporates slowly at all temperatures, and its vapor is destructive to insects. The specific gravity at ordinary temperatures is about 1.1: it melts at 79.2° (C.), and boils at about 214°. It sublimes in thin scales at 150° (C.). Although insoluble in watery menstrua and in discharges from wounds, it is taken up by steam, so that traces of it can be detected by simple distillation of urine and organic substances. It is insoluble in alkalies and weak acids; on the contrary, it is easily dissolved by ether, at ordinary temperatures, in hot alcohol, in concentrated sulphuric acid at an elevated temperature, and in various oils and fats. Owing to its volatility, the atmosphere of a room may be easily saturated with it; it is only necessary that the naphthalin should be placed in a vessel of water, the temperature of which is then to be raised to boiling, when the vapor will permeate the room, and will condense on the walls; or some naphthalin may be sprinkled on the floor, and the same result will be attained, although more slowly. The naphthalin has a penetrating odor, and a taste like coal-tar, from which it is derived. Since it is contained in such large proportion in the refuse from gas-works, and since it is so little used for other purposes, this gives the remedy the additional advantage of being low in price.

As early as 1842 an article was published by Rossignol,* in which the resemblance of naphthalin to camphor was pointed out, and its alcoholic solution recommended as a cheap substitute for spirits of camphor for sprains, bruises, etc. Its destructive effects upon the lower forms of life were also recognized, and its use in medicine as a vermifuge suggested. It was also recommended to be used locally as an ointment for chronic conjunctivitis. Dupasquier† in the same year discusses more thoroughly the therapeutics of this remedy, and highly praises it as an *expectorant* of the first rank. Where prompt stimulation of the bronchial mucous membrane is desired, or is urgent, naphthalin has produced excellent results; for instance, in chronic or senile bronchitis and asthma, where it was given in doses of .15 to 2 grammes (gr. ijss to xxx). In a monograph by Ernst Fischer,‡ from which the references of this article are principally derived, the expectorant effect of the naphthalin is attributed principally to the volatility of the remedy and its antiseptic action upon the air-passages in its escape from the body by the lungs, so that where putrefactive changes are taking place in the secretions, and the development of germs is progressing, it restricts or stops such processes, and thus favors healthy action.

The United States Dispensatory, by Wood & Bache, for 1851, contains also a notice of the employment of an ointment of naphthalin, by Emery,§ in the treatment of psoriasis, who applied it with success in a number of cases. However, but little attention was given to it until its energetic antiseptic action was utilized in the treatment of parasitic skin-diseases, and later, when antiseptic wound-dressings were required, its special advantages began to be recognized. According to the observations of Fischer,‖ at the Strasburg clinic no injurious or unpleasant effects have been observed, although it has been in use for nearly three years. Notwithstanding its very free application to wounds, and constant inhalation of its vapor, no ill effects were ever produced. From physiological experiments upon animals it was ascertained that even large doses given by the stomach only gave rise to diarrhœa without inflammation or constitutional disturbance. It had no obvious effect upon the central nervous system, and spectroscopic

* Annuaire de Thérapeutique, 1843.

† Journal de Pharmacie et de Chimie, December, 1842.

‡ Das Naphthalin in der Heilkunde und in der Landwirthschaft. Mit besonderer Rücksicht auf seine Verwendung zur Vertilgung der Reblaus, Strassburg, 1883.

§ Bull. Gén de Thérapeutique Méd. et Chir., 1842.

‖ Loc. cit.

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The chief advantage to be gained is the saving of bottles and the transportation. As 1 pound of the pure ether will make 20 pounds of the spirits when simply mixed with 19 pounds of alcohol, it is evident that the pharmacist can make the spirits at any time in convenient quantity.

We would call attention to the following properties of Pure Nitrous Ether:

It is a bright lemon-yellow colored, volatile liquid. Its specific gravity at 15° C. (59° F.) is about 0.900.

It should be only slightly acid at most, and should not liberate carbonic acid gas when shaken with a crystal of bicarbonate of potassium. Mixed with nineteen times its weight of alcohol it makes Spirits of Nitrous Ether having all the properties required by the U. S. P. 1880.

It is decomposed if kept in a warm place or in direct sunlight. IT SHOULD BE KEPT IN WELL-STOPPERED BOTTLES IN A COOL, DARK PLACE. It is inflammable, hence should be kept away from lights or fires.

If handled with the same care as ordinary ether, it is not dangerous, nor does it readily decompose.

We furnish this article, in pounds, at such a price that the pharmacist can make Spirits of Nitrous Ether, of full strength, at the same cost as he can purchase it of manufacturers.

The demand is increasing as this preparation becomes better known. We shall be pleased to receive your orders.

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examination of the blood failed to reveal any changes. It has no stupefying or narcotic influence, and, although it may be detected in the urine, it does not give rise to the toxic symptoms so often caused by carbolic acid.

When applied to the unbroken skin, naphthalin produces no irritation nor any particular sensations. In eczema it prevents the formation of crusts and the retention of secretions. The same effects are observed when it is used as a dressing for wounds: no irritation, no crusts, no pent-up discharges. Granulation is not interfered with, and cicatrization goes on undisturbed; the secretions, however, usually appear more serous than under other dressings. In all foul sores, compound fractures, ulcerating chancres, fetid cancers, the free application of naphthalin has the effect of altering the condition of the wound, removing the offensive characters. If the secretion be profuse, the naphthalin should be frequently renewed, as the dressing acts upon the cause of the putrefaction rather than on the putrefactive products, which require to be removed in order to correct the bad odor entirely.

Among the advantages of this agent as a dressing for wounds, Fischer enumerates:

1. The simplicity of the application.
2. The absolute innoxiousness of this agent.
3. The cheapness.

The disadvantages are:

1. Its insolubility in water and in the discharges.
2. Its penetrating odor.
3. The profuse secretion in those cases where large wound-surfaces are dressed with naphthalin.

Since experience has demonstrated that no real contra-indication, in a proper sense of the word, exists to the use of naphthalin, it results that it is especially suitable as an antiseptic:

1. In all cases of kidney-disease or disposition to kidney-disorder.
2. In patients with a sensitive skin, or in whom there exists special tendency to resorption from the wounded surface. That is to say, in all cases of individuals very susceptible to carbolic acid, naphthalin should be preferred as a surgical dressing.
3. In children, carbolic acid should be superseded by naphthalin in combination with some fluid or soluble antiseptic agent.
4. In wounds situated deeply in cavities of the body, as in the rectum or vagina, where secretions easily undergo decomposition, also in wounds made in removing tumors, after resections, etc., naphthalin should be used.
5. In wounds attacked by erysipelas, naphthalin should be freely applied.

Finally, naphthalin is most useful in sustaining hospital hygiene. Not only wounds but the instruments and sick-rooms can be kept aseptic.

As regards the application of this remedy, but few modes have been adopted. In the form of a dry powder it is dusted on the surface of simple, healthy wounds, for filling up deep incised wounds with offensive secretions, and also it may be used upon the dressings. In the treatment of skin-diseases, the pure crystallized naphthalin, or the resublimed white naphthalin of Trommsdorf, in Erfurt, have been used, and are identical in their effects. In the various forms of vegetable parasitic diseases of the skin, naphthalin has proved to be an efficient remedy: it is here generally used in combination with some form of ointment. In scabies, herpes tonsurans, eczema marginatum, and favus its results have been so favorable that it deserves a further trial by dermatologists. The addition of a few drops of oil of bergamot completely covers its peculiar odor.

From experiments upon various animal fluids upon the development of schizomycetes and the various germs of putrefaction, it has been conclusively demonstrated that naphthalin possesses anti-zymotic properties, if indeed it is not the very best of the known and tried anti-bacteritic substances. This action upon micrococci and bacteria of various kinds renders naphthalin a very valuable agent for the treatment of zymotic disease. Its usefulness in affections of the respiratory tract has already been referred to, and its harmlessness to the higher forms of life renders it especially worthy of more extended trial in various disorders supposed to be connected with the development of germs, such as scarlet fever, diphtheria, tuberculosis, etc. Experiments in this direction have been already commenced, but the results have not been sufficiently conclusive to report.

The bactericide properties of naphthalin have been turned to account in viticulture, and it has proved itself to be the most efficient remedy against the dreaded phylloxera,

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or disease of the vines, when thoroughly applied to the smaller roots of the vines, the manner of its employment being carefully indicated by Fischer in the monograph already referred to, by whom its employment is most earnestly and enthusiastically advocated.

NOTES FROM SPECIAL CORRESPONDENTS.

LETTER FROM PATERSON, NEW JERSEY.

FATAL CASE OF OPIUM-POISONING.

A CASE illustrating the deviousness attending the dispensing of drugs occurred here recently. About six weeks since, a child of L. Lowenthal, aged between four and five months, being ill with diarrhœa, Dr. Marsh prescribed for it "pulv. cretæ aromat. cum opii, Br., grs. xii. in chart. no. viii, t. in die," which was compounded at one of our drug-stores by preparing a reduced quantity and dispensing according to recipe. On Sunday, 15th instant, the child becoming again affected with relaxed bowels, Dr. Marsh was asked about the renewal of the prescription, and he gave his sanction. The box, with number and directions, was returned to the store; but the senior clerk who had prepared the first supply being absent, his assistant undertook its composition. Being unable to find either of the aromatic powders containing chalk, he substituted simple aromatic powder, adding the lesser part of a grain of opium (three-tenths) as the equivalent of the amount contained in the powder called for. Having mixed and divided it, he delivered it with the proper directions. The parents noticed that these powders were larger (double size, they say) and of a darker color than those first obtained, but, suspecting nothing wrong, they administered one at about eight P.M. The child did not swallow it well,—resisted, and seemed to choke. In a few minutes (estimated by the mother at three or four) its eyes began to roll and its countenance to change. It soon seemed bereft of sense and motion. The powders were returned to the druggist, with a notification that there was something wrong about them. The clerk pronounced them all right,—that there was a dark and a light powder of this description. Nevertheless, he procured the true drug from a neighboring store, and dispensed it in place of that returned. When asked for the original package, or a powder from it, he said that he had destroyed it. He, however, retained it in his pocket, and on retiring for the night deposited it in a chamber-utensil. The child, meanwhile, seemed in such a desperate condition that Dr. Marsh was summoned. Arriving about nine P.M., he immediately diagnosticated opium-poisoning, the symptoms being insensibility, interrupted slow breathing, thread-like pulse, and intensely contracted pupils. Vigorous measures were taken to counteract the poison and keep the heart going, the electrical battery being in almost constant use. At nine A.M. (16th), according to the testimony of one of the consultants, the patient was in a profound stupor, nearly pulseless, the skin dark in color and cold, the pupils contracted to the size of a pin's head, and the respirations eight per minute. These and other symptoms led him to believe it a case of opium-poisoning. The child lingered until four P.M., and then died.

One of the physicians engaged on the autopsy testified: "I found the lower part of the lungs greatly congested, almost amounting to inflammation. There was no air in the lower part of the lungs. In the right side of the heart there was a great deal of watery blood. The rest of the organs were healthy, with the exception of the brain, which was somewhat congested." In answer to questions, he said, "This state of congestion might have been due to some other cause besides the taking an overdose of some narcotic. I thought the child was in the first stage of inflammation of the lungs. The lower lobes were almost solidified. The condition would have been sufficient to produce death in so small a child." When asked, "Did you find any evidence of summer complaint or cholera morbus?" he said, "No; but I did not open the intestines. From what I saw of the body, the cause of death was the condition of the lungs."

Dr. Marsh testified that, "when first seen, the patient seemed to be in a state of collapse, as though it would die in a few minutes, as though something was pressing upon the brain,—a sudden oppression of the nervous system. There were no lung-symptoms. The respiration was irregular and slow, interrupted. During treatment it became a little more frequent. The cause assigned before death, from the symptoms and surroundings, was narcotic poisoning. The child received a larger dose than I prescribed." The jury, after a deliberation of two or three hours, returned the following verdict:

"We the undersigned jurors, sworn to inquire into the cause of death of Clara Lowenthal, do hereby find that she came to her death by accidental poisoning, caused by opium in powder, as prescribed originally by Dr. Marsh, and renewed at the time of the child's death by the advice of Dr. Marsh, when applied to, and compounded by John Lane, who the jury believe is censurable for carelessness in not properly mixing the ingredients of said prescription." The "carelessness" complained of by the jury is said to be the substitution resorted to.

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FATAL EXPLOSION OF GASES.

The following may be of interest to persons having inflammable materials stored about their premises.

Near the time of the great national holiday, a boy, seeing upon the sidewalk what appeared to be an empty whiskey-barrel, concluded that he would see how a fire-cracker would detonate in its interior, and so dropped his lighted explosive into the bung-hole. The result greatly exceeded his expectations, for it encountered some explosive gas, which, being true to its principles, loudly resented this intrusion, rending the barrel violently asunder, and sending its component parts whirling through space. The experimenter received such injuries from the hurtling fragments that he spent the following fortnight in hospital, ruminating, doubtless, on the unexpected liveliness of his special celebration.

The following has an equal interest, and is far more tragical. It throws light on the narrowness and greed of builders and the thoughtlessness of those who occupy their fabrics.

About the middle of the present month, a firm of painters and paper-hangers, occupying what appears above ground as a spacious and well-ventilated warehouse, received an order for a barrel of paraffine. This, with other combustible material used by the trade, was stored in an excavation beneath the store, destitute of any ventilation or light whatever. It was entered by a trap-door, and the material raised to the store-floor by a hand elevator worked by a windlass and ropes. On this occasion one of the employés went below to secure the barrel, a man standing at the elevator to lift it when ready. As he was unable to find it in the darkness, one of the firm descended, confident that he could find it with his eyes shut. Neither, however, could discover it, and a lantern was called for, which was lighted and lowered. No sooner did it reach the region saturated with the gases than an explosion occurred, which swept the man away from the lifting-apparatus, who, scorched and dazed, retreated from the place of danger. One of the victims escaped leaping the blazing pit with some assistance, a convenient basis for parts of his charred clothing still burning, eyelids into the street, where a thoughtful neighbor extinguished the burning garments by wrapping a coat about the sufferer. The burns were so severe that death ensued the following day.

The flames rapidly extended, and the fire department were quickly at work in quenching the conflagration. As the second man known to have been in the pit at the time had not appeared, he was sought for in the cellar, and was there found dead, lying in a pool of water.

Thus were sacrificed by the thoughtlessness of the tenants—it may be by the criminal niggardliness of the builder or owner—the lives of two young men, greatly esteemed, and bidding fair to become citizens of the first rank in the State and in the community.

E. T. BLACKWELL, M.D.

July 28, 1883.

CINCINNATI.

THE health of Cincinnati is generally much better in summer than in any other season of the year, and the present summer is no exception to the rule. As a consequence, many of our physicians take a vacation and allow their patients time for recuperation. Drs. P. S. Conner, W. W. Seely, James T. Whittaker, Joseph Aub, and William Carson are among the prominent physicians who are away recruiting. As a large number of our wealthiest citizens are also away, the sick remaining can be very easily attended by stay-at-home physicians.

The New Board of Health.—The Superior Court did not see fit to appoint a Health Commissioner for Cincinnati, so the Common Council have taken the matter in hand and done what we all feared they would do,—viz., appointed a Health Board. The average ward politician of this city has an exalted idea of sanitary matters, as is witnessed by the character of this (let us hope) unique Board of Health. Five saloon-keepers and a doctor of unsavory reputation embody the wisdom that is to regulate all matters pertaining to the public health. With expected sagacity, they have appointed an insurance agent of some notoriety in local politics as health officer, and have divided the city into twenty districts, over which is placed a ward physician with the munificent salary of three hundred dollars per annum. With a health board and health officer of such material as we have, the doctors are getting ready to reap a rich harvest during the ensuing year.

Medical Clinics.—There are in the city five or six free medical clinics, which probably treat fifteen thousand cases a year. Fully half of these cases are well able to pay a reasonable fee for medicine and physicians' services. Some resort to the free clinics after having spent all their money on quacks; others resort to the free dispensary with the excuse that their usual physician has failed to cure them and they desire the extraordinary experience of the dispensary doctor. The large proportion of the patrons of the free clinics are foreigners and negroes, and many of them go to the clinics and demand treatment and medicines as a right. The physicians do an immense amount of gratuitous work in our free dispensaries and hospitals. Not even do they get or deserve credit for charity in most instances. A hospital or clinical position is too frequently sought after simply to give prominence to the physician and to assist him in his private practice.

A. B. T.

August 15, 1883.

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PROCEEDINGS OF SOCIETIES.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

A CLINICAL conversational meeting of the Society was held at the hall of the Society, on Wednesday, June 20, 1883. Dr. J. M. Barton read the following notes of a case of marked improvement in phthisical symptoms after amputation for relief of *caries necrotica* of the left hand.

Henry M., æt. 36 years; tanner by trade. In the early part of this year I found the patient in the German Hospital.

He had suffered since 1880 with lung-symptoms and with caries necrotica of the bones of the carpus, metacarpus, and phalanges of the left hand: he had no history of syphilis or of inherited phthisis.

There was an extensive deposit, which had undergone softening, in the apex of the right lung: it included almost the entire upper lobe. Over several other portions of the chest, both anterior and posterior, similar deposits, of limited extent, were found: they had also broken down.

He had loss of appetite, hurried respiration, and profuse night-sweats; his evening temperature, of which I show the record, was between 101° and 102°, and occasionally 103°; his expectoration was purulent, and about f℥vi in the twenty-four hours.

The condition of his hand added greatly to his distress: it was the seat of a constant offensive discharge, and was swollen and painful. It interfered greatly with his rest at night.

To make him more comfortable, to remove a source of depression, and with a slight hope of removing one source of the pulmonary deposit, I advised removal of the arm. My colleagues agreed with me at once as to the propriety of removing the arm, the only question being if the patient could stand the operation and the anæsthetic.

The dangers were submitted to the patient, who stated that he was so wretched he did not care if the operation proved fatal.

The operation was performed rapidly under the first anæsthesia of the ether. The stump healed quickly, the temperature immediately began to go down, and since the fourteenth day after the operation has been on two evenings only over 100°; it is now normal; his expectoration has diminished to less than f℥ss; his night-sweats have entirely ceased; his appetite is normal.

The condition of his lungs has much improved. He has gained ten pounds in weight, and he is now earning his living as doorkeeper to the Hospital.

There are several points worthy of note in this case.

1st. The relief of a surgical disease associated with phthisis was not followed by increase in the lung-trouble, as is said to occur when we relieve an anal fistula under such circumstances.

2d. That as a mere matter of comfort to the patient it is well to remove painful surgical affections, even in advanced lung-disease.

3d. The chart which I have shown is in its earlier part, with its high evening and low morning temperatures, nearly a typical phthisis chart. Most of his constitutional disturbance was regarded as proceeding from his lung-troubles; but the rapid improvement in his temperature-record, occurring long before any decided improvement could have taken place in the lungs themselves, shows that the high temperature probably mainly arose from the hand.

4th. What influence the inflammatory deposits in the hand had in producing and increasing the lung-troubles is, of course, uncertain; but the very decided improvement in the lungs makes it appear as though the condition of the hand had more to do with the condition of the lungs than merely the depressing effects of the pain and suppuration.

AMERICAN OPHTHALMOLOGICAL SOCIETY.

THE American Ophthalmological Society held its nineteenth annual meeting at Hotel Kaaterskill, Catskill Mountains, New York, on July 18 and 19, 1883. The sessions were presided over by Henry D. Noyes, M.D., of New York, who, in place of a formal address, simply made a few introductory remarks.

Among the papers read were some of especial value, but, as usual, they were generally of high order, and well represented the recent advances in this department of medicine. Dr. Hasket Derby, of Boston, contributed an essay upon "The Influence upon Refraction of Four Years of College Life," which was illustrated by statistics of the last four classes which had graduated from Amherst. The investigation showed a large amount of myopia, increasing progressively with the length of the term of study.

Dr. Russell Murdoch, of [illegible] child received some new [illegible] prescribed." The appliances for [illegible]. Dr. Henry S. Schell[illegible] Philadelphia, reported a case of prim[illegible]tubercle of the iris in a boy, in whom morbus coxarius afterwards developed. Dr. O. F. Wadsworth, of Boston, also reported a case of tuberculosis of the ciliary muscle and iris in a girl three years old. Dr. Swan M. Burnett subsequently exhibited a specimen of tubercle of the choroid.

Dr. S. F. McFarland related his personal experience with prismatic glasses, originally used for slight divergent strabismus. Prisms gave much assistance, and with their aid he obtains satisfactory binocular vision. Dr. O. F. Wadsworth discussed the apparent curva-

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ture of surface produced by prisms, in a paper illustrated by numerous diagrams by Dr. Pierce.

Dr. J. A. Spaulding, of Portland, Maine, reported a case of sympathetic neuro-retinitis, with remarks, and reported a case in which severe hemorrhage succeeded the operation. Dr. David Webster, of New York, gave a summary of thirty-five cases of cataract-extraction, with twenty-seven successes. Some notes on ocular therapeutics were contributed by Dr. W. W. Seely, of Cincinnati.

The treatment of detachment of the retina was considered in a paper read by Dr. W. F. Mittendorf, of New York. He advocated quietude, rest, freedom from irritation, and the use of a mydriatic, the administration of jaborandi or pilocarpin in order to hasten the absorption of effusion, preferably by hypodermic injection. The use of a bandage either of flannel or of rubber was also recommended for making pressure. He reported three cases successfully treated.

Dr. William S. Little reported two cases of ectopia lentis (both congenital), one symmetrical, the other non-symmetrical.

Dr. George T. Stevens, in a short communication, recommended the use of nitrous oxide as an anæsthetic in ophthalmic operations.

A contribution to the operative treatment of glaucoma was read by Dr. Albert G. Heyl, of Philadelphia, in which ligation of the frontal artery, then opening the supraorbital in order to allow a few ounces of blood to escape, and finally closing this artery also with a ligature, were recommended.

Dr. Charles J. Kipp, of Newark, reported several cases of sarcoma of the choroid, and also described a case of ossification of the choroid in a young man.

Dr. Theobald, of Baltimore, read a paper on trituration of the anterior cortical layers of the lens by pressure on the cornea after iridectomy, and while the anterior chamber is still empty, as suggested by Foerster, of Breslau.

Dr. Gustavus Hay, of Boston, read an article describing the astigmatic pencil.

On the second day the first paper read was on vaseline cerate, which was recommended as a convenient basis for ointments intended for applications to the eyelids, by Dr. Theobald, of Baltimore.

Dr. H. Knapp, of New York, read a clinical report of a case of blindness from retinal thrombosis in consequence of facial erysipelas.

Dr. W. H. Carmalt, of New Haven, reported a case in which changes of refraction resulted from a blow upon the right eye.

A further modification of cataract-extraction in difficult cases was reported by Dr. E. W. Bartlett, of Milwaukee, Wisconsin, by which two preliminary iridectomies were recommended, one upwards, the other downwards.

Dr. Gruening, of New York, read a paper entitled "Blepharoplasty according to the English Method."

Dr. McKay, of Wilmington, reported a case in which a successful cataract-extraction was followed by loss of the eye, which was attributed to sewer-gas poisoning. The same reporter also related a case of sympathetic neuro-retinitis occurring during pregnancy.

Some of the difficulties in making a differential diagnosis in glaucoma were illustrated by Dr. L. Howe, of Buffalo, by the report of a case occurring in a child four months old.

Dr. E. E. Holt, of Portland, Maine, read a paper upon "Commotio Retinæ," in which some of the direct and indirect effects of blows upon the eye were considered.

Dr. F. B. Loring, of Washington, reported one case of injury to the eyes after hanging.

Dr. McKay reported three cases of coloboma of the choroid.

Dr. Charles Stedman Bull, of New York, presented a paper on two cases of exophthalmoplegia externa, associated with disease of the optic nerve from brain-tumor, with an account of the post-mortem examination, which was read by title only.

The following gentlemen were elected

OFFICERS FOR 1883–84.

H. D. Noyes, M.D., New York, *President;* William F. Norris, M.D., Philadelphia, *Vice-President;* R. H. Derby, M.D., New York, *Secretary and Treasurer;* Drs. Loring and Roosa, New York, *Publication Committee.*

Next annual meeting on the third Wednesday in July, 1884, at the same place.

AMERICAN OTOLOGICAL SOCIETY.

THE sixteenth annual meeting of the Otological Society was held at the Hotel Kaaterskill, New York, on July 17, Dr. J. S. Prout, of Brooklyn, Vice-President, occupying the chair.

Dr. W. W. Seely, of Cincinnati, read the clinical report of a case of primary epithelioma of the ear, in which removal of the entire auricle was required, the operation being performed with the thermo-cautery. The disease had apparently originated from traumatism,—the bite of a rat which had remained unhealed for a long time.

The recognition of brain-complications in aural affections was the important subject considered in a communication read by Dr. J. A. Andrews, in which the details of five cases were given; and Dr. Chas. H. Burnett reported a case of mastoid disease, in which death from pyæmia occurred, notwithstanding perforation of the bone was performed.

A case of acute desquamative inflammation of the external auditory canal, followed by acute otitis media, mastoiditis, and chronic meningitis, with final recovery, was reported

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by Dr. Read J. McKay, of Wilmington, Delaware.

Dr. E. E. Holt, of Portland, read the notes of a case of teratoid tumor of the lobe of each ear, with seven recurrences, in a woman 29 years of age, following perforation for gold ear rings. The same reporter also read a paper containing some observations on the hearing-power under different conditions of aural disease.

Dr. Charles J. Kipp called attention to the association of aural disease with simple sparkling synchisis of the vitreous humor, illustrated by cases.

Dr. S. Sexton, of New York, read a very able paper on the significance of the transmission of sound to the ear, through the tissues, in ear-disease, and also exhibited some photographs illustrative of aural affections.

Dr. H. Knapp reported an interesting case of desquamative otitis media finally cured by boracic-acid treatment.

The following papers were read by title only: External and Internal Inflammation of the Mastoid, with Cases, by S. Sexton, M.D., of New York; one on The Intermittent Perception of Sound, with summary of Results of Treatment, etc., by J. A. Andrews, M.D., of Staten Island; and a report of a case of sebaceous gland in immediate proximity to the auricle, by C. A. Todd, M.D., of St. Louis.

The following gentlemen were elected

OFFICERS FOR 1883-84.

President. — Charles H. Burnett, M.D., Philadelphia.

Vice-President.—J. S. Prout, M.D., Brooklyn.

Secretary and Treasurer.—J. J. B. Vermyne, M.D., New Bedford, Massachusetts.

Committee of Publication.—Drs. J. J. B. Vermyne, C. J. Blake, and J. Orne Green.

The next annual meeting to be held on the day before the third Wednesday in July, 1884, at the Hotel Kaaterskill.

GLEANINGS FROM EXCHANGES.

FRACTURE OF THE LARYNX BY DIRECT VIOLENCE.—James Oliver, M.B., reports the autopsy of an interesting case of fracture of the larynx by direct violence,—an accident of infrequent occurrence, and one which from a medico-legal point of view is of great interest. The thyroid cartilage in its normal state is of such a structure that interference with its continuity can only result under very untoward circumstances. Like other structures of a similar nature in the human frame, however, the laryngeal cartilages are liable in advanced life to become the seat of ossific deposit, and then to be more easily fractured. The injury in my case had evidently resulted from the free use of a piece of wooden rail. The post-mortem appearances were in every respect those of death by suffocation, and need no mention. The larynx, with the pharynx, tongue, etc., was removed *en masse*, and examined. The thyroid cartilage, more especially the right half of it, was broken up into many pieces, one of which hung free in the lumen of the tube, evidencing great violence. Ossific change was very extensive. Corresponding with the inferior border of the body of the lower maxilla was a wound, incised in appearance, running from the middle line outwards to the left, and extending for about three inches. The wound was gaping, and exposed the bone for about an inch and a half. The left extremity of this wound was deeper than the right, and running from it was a smaller one, half an inch in length, directed towards the left angle of the mouth, and almost at right angles to the large wound. The junction of the two wounds had a thready appearance; they were apparently caused by a blow against the hard bone underlying. A small linear abrasion, about a quarter of an inch in width, could be detected on the skin over the prominent part of the thyroid cartilage, which corresponded closely with others very similar, but much more extensive, on the scalp. The facts taken together all pointed to fracture by direct violence. Throttling is the more usual cause of fracture of the larynx; but when death results in this way the assailant usually maintains his grasp of the neck till the victim shows no sign of life, should circumstances permit of such. We must not, therefore, when this is the cause of death, expect to find ecchymosed spots over the larynx; for the blood being pressed out leaves parchment-like marks of a contused appearance, to which the blood never returns. —*Lancet.*

GLYCOSURIA WITH URINE OF LOW SPECIFIC GRAVITY.—Prof. Cameron in certain cases has found sugar in urine of a specific gravity of 1015, 1008, 1007, and even 1005. Some of these were merely temporary drops from an ordinary gravity of 1025 to 1035. There was no doubt as to the purity of these low specimens from any admixture with water after being passed. In the urine of 1005 there was a mere trace of urea, and the solids consisted almost entirely of sugar and chloride of sodium. The writer gives an important caution as to applying the sugar test, in the following words: "In examining urine it is always necessary to look for sugar, no matter whether the specific gravity of the fluid may be normal or otherwise. I occasionally find urine with a very high specific gravity, and with a, so to speak, diabetic appearance, to be quite free from sugar. On several occasions, in specimens of urine believed to contain sugar, I could not detect a trace of that substance. A few months ago I examined the urine of a man who had been

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treated for diabetes. The urine had a specific gravity of 1035, and on being boiled with Fehling's solution it gave a copious precipitate of cuprous oxide. There was something in the appearance of the precipitate, and in the slow way in which it made its appearance, that led me to suspect that it was not produced by sugar. This proved to be the case, for on treating the urine with yeast no carbolic acid (save a mere trace) was evolved. The presence of large quantities of urates in urine causes a brown precipitate with Fehling's solution. The urates, even when abundant, do not always separate as the characteristic 'brick-dust.' I have found very large quantities of urate of ammonium in urine which remained clear on standing, but which gave a brown precipitate on being boiled with Fehling's solution. When testing for sugar in urine it is necessary to ascertain whether or not urates are present in large quantities. If they are, they can be precipitated by the addition of hydrochloric acid, and the urine filtered or decanted from the precipitate can then be satisfactorily tested for sugar with Fehling's solution."—*Dublin Journal of Medical Sciences.*

RENAL CYSTS AND OVARIAN GROWTHS TREATED SIMULTANEOUSLY BY OPERATION.—At the Royal Medical and Chirurgical Society of London, recently, Dr. J. Knowsley Thornton read a report of an interesting case in which cysts in connection with both kidneys were opened and drained, and a tumor of the right ovary removed, the patient remaining in good health. E. M., a single woman, aged 27, was admitted into the Samaritan Hospital in November, 1877, under the care of Mr. Spencer Wells. She had had a child born alive at full term when she was only fifteen. When seventeen she had inflammation of both kidneys, and from that time had been failing in health, and had been unable to lie on her right side for fully a year. When admitted, she had a fluctuant tumor of considerable size in the right side of the abdomen, with a red, tender, and pointing swelling in the right loin behind this tumor. There was a smaller tumor in the left side of the abdomen, which occupied an exactly similar position to that in the right side, but did not distinctly fluctuate. There was nothing wrong with the urine, and no trouble with bladder or kidneys, except pain across the loins and in the lower abdomen, which was not, however, constant. Menstruation was regular. The swelling in the right loin was freely incised by Mr. Wells under Listerian management, but nothing to account for its presence was found, and no communication appeared to exist between it and the kidney or ureter. It contained fluid very like that from an ovarian cyst, with an immense quantity of cholesterine. It was dressed antiseptically and drained, and in six weeks the patient went home well, all trace of the cyst having disappeared. Six or eight weeks afterwards she had an attack of gout in both feet; then the wound opened, and a large discharge of fluid with much cholesterine took place, and the wound gradually healed up again. In January, 1880, she was readmitted under the author's care, with a tumor of the right ovary, for which he performed ovariotomy. While the abdomen was open he examined the kidneys and ureters. The right kidney was large and sacculated, and its ureter was much enlarged, especially at the pelvic brim. The left kidney and ureter appeared quite normal. The recovery after the ovariotomy was rapid, but soon after getting up the swelling in the right loin reappeared, with fever, etc., andshe was obliged to return to bed. It was poulticed antiseptically until it broke, and then drained as before, and she left the hospital apparently well in three weeks from the time it burst, and about six weeks from the ovariotomy. In six weeks she returned with a swelling in the left iliac region in the situation of the left ureter; this was opened and drained antiseptically, and again in about six weeks she went home well. Fifteen months later the wound in the right side again opened, and discharge went on for fourteen months without apparently affecting her health at all. It has now closed again for two months, and she is in excellent health. The left side has not given any further trouble. After detailing the case, the author makes remarks and suggestions as to the probable pathology of these various lesions, and invites suggestions from the Fellows as to this very curious case, and reports of any others at all like it.—*Medical Times and Gazette.*

THE RISKS OF MASSAGE.—Dr. Julius Althaus, M.D., Senior Physician to the Hospital for Epilepsy and Paralysis, Regent's Park, deprecates the abuse of massage, a practice often now employed where it can be of no service. "It is well known that at various times epilepsy, idiocy, and some forms of insanity have been treated by massage and gymnastics; but, fortunately, we now hear very little of such therapeutical aberrations.

"It appears to me that diseases of the brain and spinal cord must, on account of the anatomical situation of these organs, be inaccessible to the influence of massage, which can only be applicable to more superficial parts of the body. Apart from this, however, it is important to consider that many of the most important diseases of these organs are of an inflammatory or irritant character, either primarily or secondarily; and this should make it self-evident that massage should not be used for their treatment, even if the suffering parts could be reached by it. I will here only allude to many forms of cerebral paralysis from hemorrhage, embolism, and

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thrombosis, which are followed by sclerosing myelitis of the pyramidal strands; and most forms of primary lateral, posterior, or insular sclerosis of the spinal cord.

"That which may be good for developing and strengthening healthy muscles, or muscles which have been enfeebled by disuse or certain local morbid conditions, etc., is not for that reason suitable for the treatment of muscular paralysis owing to central disease. In most cases of lateral and insular sclerosis, which are, unfortunately, now much treated with massage and exercises, rest is indicated rather than active exertion; and overstraining of the enfeebled muscles acts prejudicially on the state of the nervous centres. I have recently seen quite a number of instances in which the central disease had been rendered palpably worse by procedures of this kind; and in a case of cerebral paralysis which was some time ago under my care, the patient had, after four such sittings, been seized with collapse, which nearly carried him off."—*British Medical Journal.*

BILLROTH'S METHOD OF OPERATIVE TREATMENT OF CANCER OF THE TONGUE.—Both lingual arteries are first ligatured; the mouth is then kept open by a speculum, and all diseased teeth opposite the ulceration are extracted. The gum is next separated from the inside of the lower jaw with the raspatory. Excision of the floor of the mouth is then effected by means of scissors and forceps. The bleeding points are ligatured, and the tongue, being drawn forward, is finally extirpated. After the separation of the organ, permanganate of potash, either in powder or in watery solution, is applied to the wounded surface, and a drainage-tube, of the thickness of a finger, is inserted through the floor of the mouth. Through this the various discharges escape, and diphtheria of the mouth, cervical phlegmon, and broncho-pneumonia do not occur in such cases when properly drained. The patients are fed by means of a stomach-tube, until the drainage-opening has quite closed.

The proceeding is not so severe as the methods of Langenbeck and of Regnoli and Czerny; and the immediate results of the operation are more favorable than by any other plan,—namely, 84.2 per cent. of recoveries. The deaths were caused by septicæmia (acute or chronic) or by pyæmia. In seventy-one cases ten radical cures have been obtained (fourteen per cent.) by Prof. Billroth; while in three hundred and seventy-three instances of mammary excision only fifteen radical cures have resulted.—*Medical Record.*

GASTROSTOMY FOLLOWED BY FATAL PHLEGMONOUS GASTRITIS.—In a case of organic stricture of the œsophagus occurring in a man 54 years of age, where a diagnosis of malignant disease of the tube in its lower portion was made, Mr. H. W. Page performed gastrostomy in the manner indicated by Mr. Bryant. A permanent gastric fistula was successfully established, and the patient had apparently recovered from the operation, and was regaining flesh, when about two weeks after operating he began to vomit, and, although his efforts brought up very little, they caused great pain. His temperature, which had been normal for several days, again rose, he passed into a collapse, and died thirty-six hours after the sickness began. Post-mortem examination showed generally diffused acute parenchymatous gastritis without secondary deposits. The growth in the œsophagus was found to be scirrhus. Listerian dressings had been used, and it was believed that the operation did not directly cause the attack of this rare form of gastritis; it was not of septic origin, and there was no phlegmonous condition or erysipelas about the external parts, nor any evidence, microscopical or otherwise, that the inflammation started from the margins of the wound.—*Lancet*, July 14.

GAULTHERIA IN RHEUMATISM.—At the New York Medical and Surgical Society, Dr. Flint stated that the results of the trial made of this substance in thirteen cases at Bellevue Hospital served to show rather better results from gaultheria than those which are ordinarily obtained from salicylic acid. The oil of wintergreen was the preparation used, and it was administered several times a day in ten-drop doses in flaxseed tea, which renders it less disagreeable to the taste and to the stomach. In some of the cases the alkaline treatment was employed at the same time. Dr. Ball stated that Dr. Kinnicutt had used the oil of gaultheria in a number of cases of acute rheumatism with even better results than those mentioned by Dr. Flint. It was administered in milk, and was less disagreeable when so taken than salicylic acid or salicylate of soda.—*New York Medical Journal*, June 30.

REPAIR OF LACERATED CERVIX.—As the result of thirty-one operations for laceration of the cervix uteri in the practice of Dr. Ely Van de Warker, reported in the *American Journal of Obstetrics*, the operator gives the following: uterine displacement unchanged in sixteen cases; uterine displacement improved in eleven cases; uterine catarrh unimproved in ten cases, and improved in eleven cases; subjective symptoms unimproved in three cases, and improved or entirely relieved in sixteen cases; nutrition improved in eighteen cases, and remaining unchanged in five cases. Other treatment was found necessary in twelve cases.

QUININE INTOXICATION.—A correspondent of *Die Pharmaceutische Post* says that as a remedy for the relief of quinine intoxication, as he calls the over-stimulation caused by quinine in excessive doses, he has used

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ergot in several cases, and finds that to neutralize the cerebral effect of one gramme of quinine at least one and a half grammes of powdered ergot, or one gramme of ergotin, must be employed. With this remedy the most annoying tinnitus may be entirely removed during the administration of quinine. —*Quinologist.*

MISCELLANY.

A MODEL BOARD OF HEALTH.—Cincinnati has a Board of Health at last, and we hope that it will remain the sole specimen of its kind, "wrapped in the solitude of its own originality."

The Common Council has elected five saloon-keepers and one doctor, all "practical politicians," to take charge of the health of the city. They are all Democrats except the doctor,—which is a good thing for the Republicans. The utter scorn of, and contempt for, public opinion manifested by this action of the Common Council is something very remarkable, the more so when it is remembered that an epidemic of cholera is impending, and that Cincinnati is in no condition to meet it, its water-supply being in special danger of contamination, its sewerage defective, and its soil in many places polluted by cesspool and privy soakage.

"Whom the gods would destroy they first make mad," and this action of the Council ought in itself to be almost sufficient evidence to prove that the members are insane and should be placed under skilled treatment in a public asylum devoted to such cases. This would certainly be the result in the case of a private individual who treated his business interests in a similar manner.—*Sanitary Engineer.*

BRAIN-WEIGHT IN BOYS AND GIRLS.—The statement of MM. Manouvrier and Budin that sex has no influence upon brain-weight has been called in question by M. Gustave Le Bon. Opposed to the views that the influence of sex is nothing more than the influence in height, and if the females, as a whole, are surpassed by the males in brain-weight, it is simply because the weight of the body in the females is much below that of the males, he places the results of investigation. From a comparison between boys and girls of the same weight, M. Le Bon shows that the male children in the great majority of cases exceed the female in their cranial circumference. At the same age, height, and weight of the body, the female brain is still notably smaller than that of the male.—*Bull. Soc. Anthrop., Paris: Science.*

CHOLERA COMMISSIONS.—A commission from England, organized by and under the charge of Surgeon-General W. Hunter, M.D., has arrived in Egypt, and is engaged in investigating the cholera epidemic. The sanitary conditions discovered are of the worst kind. The inhabitants live in the midst of filth and in defiance of hygienic laws. Pasteur having offered to organize a commission for the same purpose, his proposition has been endorsed by the Hygiene Commission, and he has set off for Egypt with some collaborators.

DR. OSLER.—Dr. William Osler, Professor of Physiology in McGill University, Montreal, has just been elected a Fellow of the Royal College of Physicians of London. This distinguished honor is a just appreciation of the excellent scientific work done by Dr. Osler.—*Medical News.*

PROFESSOR RUDOLPH VIRCHOW has resigned from the Association of German Physicians, the Association having publicly censured him for writing a note of thanks to an apothecary, Brandt, who sent him a box of pilulæ helveticæ (the formula of which is published) during a recent sickness. This note stated that the pills had been beneficial to Prof. Virchow, and Brandt, without his knowledge, published it as a testimonial. The Association was too hasty, apparently, for Prof. Virchow denies that he gave a testimonial at any time for these or any other pills.

A MEMORIAL TABLET to the late Prof. Skoda, of Vienna, was unveiled with some ceremony on the 13th ult. The tablet is placed on the house in which Skoda lived and died, and the municipality have also, in honor of the illustrious physician, changed the name of the street to "Skoda-gasse." There was a large attendance of the university students on the occasion, and, after a few words from Prof. v. Arlt, Prof. Schrötter, a pupil and friend of Skoda, made the speech of the day, in which he alluded to Skoda's labors not only in the cause of medical science and education, but in sanitation.—*Boston Medical and Surgical Journal.*

THE appointment of Thomas Dwight, M.D., as Parkman Professor of Anatomy in the Medical School of Harvard University has lately been announced. Dr. Dwight succeeds Dr. Oliver Wendell Holmes, who resigned nearly a year since, having himself succeeded Dr. Dwight's grandfather, the late Dr. John C. Warren, some thirty-five years ago.—*Boston Medical and Surgical Journal.*

OXIDE OF ZINC AS A SUBSTITUTE FOR IODOFORM.—In the treatment of wounds Dr. Petersen, of Kiel, considers zinc oxide a good substitute for iodoform. It is cheaper, and is not poisonous.

HONORS TO MEDICAL MEN.—The honor of baronetcy has been conferred upon Dr. Andrew Clark and Mr. Prescott Hewett, of England. Dr. Banks, of Dublin, has been offered, and declined, the inferior honor of knighthood.

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The queen has knighted Mr. Edwin Saunders, who has been her dental surgeon for many years.

CREMATION AS A MEANS OF PREVENTING THE SPREAD OF CHOLERA.—The Municipal Council of Paris proposes to establish crematories in three of the principal cemeteries of Paris, which, in anticipation of cremation becoming legal, are to be used in case of a cholera epidemic breaking out.—*Paris Letter to Lancet.*

DR. ARCHAMBAULT, physician to the Hôpital des Enfants, has just died, after a long and painful illness. One of the most distinguished pupils of Trousseau, he particularly distinguished himself, like his eminent master, in the operation of tracheotomy,—not so much for his manual skill, however, in its performance, as for his great discrimination in the selection of appropriate cases, and their able management.

BROMIDE OF SODIUM IN SEA-SICKNESS.—Mr. T. M. Kendall reports (*British Medical Journal*) the results of his treatment of two hundred cases of sea-sickness. He confirms the views of the late Dr. Beard, that bromide of sodium is the most efficient of all remedies. He found that in doses of ten grains, three times a day, it was effectual. Mr. Kendall condemns the too indiscriminate use of oranges, lemons, champagne, and brandy.

BRITISH MEDICAL ASSOCIATION. — The fifty-first annual meeting of the British Medical Association was held at Liverpool, from July 31 to August 4, inclusive. It was largely attended, and was altogether a successful and satisfactory gathering.

DR. CALVIN ELLIS has resigned the position of Dean of the Harvard Medical School, and Dr. H. P. Bowditch has been elected his successor.—*Boston Medical and Surgical Journal.*

DR. JOHN A. OCTERLONY has been appointed Professor of Obstetrics and Diseases of Women and Children in the University of Louisville.

NOTES AND QUERIES.

THE third and last volume of Agnew's Surgery will be ready on September 1.

THROUGH an erroneous statement in some of the New York papers, many of our friends and customers at a distance have been misled into the belief of the total destruction of our establishment by fire.

We have the gratification of informing them, by this means, that, although the damage to us has been considerable, the chief portion of our works was saved, and our business is progressing as usual.

While the favors of our customers will generally meet with their usual prompt attention, we ask the kind indulgence of our friends should any of their orders be slightly delayed. We expect to have the destroyed buildings rebuilt within a few months, when our facilities will be even more ample than before for the transaction of our business.

HANCE BROTHERS & WHITE,
Manufacturing Pharmaceutists and Chemists.
PHILADELPHIA, August 11, 1883.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY FROM AUGUST 4 TO AUGUST 18, 1883.

BAXTER, JEDEDIAH H., CHIEF MEDICAL-PURVEYOR U.S. ARMY.—To proceed to San Francisco, California, *via* St. Louis, Missouri, on public business connected with the Medical Department, and on completion thereof will return to his station. Paragraph 1, S. O. 185, A. G. O., August 11, 1883.

MCPARLIN, THOMAS A., LIEUTENANT-COLONEL AND ASSISTANT-MEDICAL-PURVEYOR. — Relieved from duty in charge of the purveying depot in San Francisco, California, to take effect September 1, 1883, and will then proceed to New York City and relieve Assistant-Medical-Purveyor Ebenezer Swift of the charge of the purveying department in that city. Assistant-Medical-Purveyor McParlin will transfer all funds and public property in his possession to Medical-Storekeeper Henry Johnson, who, until further orders, will perform the duties of acting-assistant-medical-purveyor at the purveying depot in San Francisco. Paragraph 5, S. O. 183, A. G. O., August 9, 1883.

MAGRUDER, DAVID L., LIEUTENANT-COLONEL AND SURGEON.—Leave of absence extended one month. S. O. 89, Military Division of the Missouri, August 4, 1883.

FORWOOD, WILLIAM H., MAJOR AND SURGEON.—To proceed to Fort Washakie, Wyoming, and Fort Ellis, Montana, on public business, and return. S. O. 87, Military Division of the Missouri, August 2, 1883.

WOODWARD, JOSEPH J., MAJOR AND SURGEON.—Leave of absence granted on account of sickness by S. O. 34 extended six months. S. O. 179, A. G. O., August 4, 1883.

BURTON, HENRY G., CAPTAIN AND ASSISTANT-SURGEON.—Relieved from duty at Fort A. Lincoln, D. T., and assigned to duty at Fort Assiniboine, M. T. Paragraph 1, S. O. 141, Department of Dakota, August 11, 1883.

BARNETT, RICHARDS, CAPTAIN AND ASSISTANT-SURGEON.—Granted leave of absence for one month on surgeon's certificate of disability. Paragraph 2, S. O. 149, Department of the East, August 10, 1883.

BYRNE, CHARLES B., CAPTAIN AND ASSISTANT-SURGEON.—Relieved from duty at Fort Craig, N. M., and assigned to duty at Fort Lewis, Colorado. Paragraph 3, S. O. 161, Department of the Missouri, August 6, 1883.

LAUDERDALE, JOHN V., CAPTAIN AND ASSISTANT-SURGEON.—Granted leave of absence for two months, to take effect on or about the 15th instant. Paragraph 2, S. O. 90, Department of the Missouri, August 6, 1883.

BENHAM, R. B., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Relieved from duty at Fort Assiniboine, M. T., and assigned to duty at Fort A. Lincoln, D. T. Paragraph 2, S. O. 141, Department of Dakota, August 11, 1883.

KANE, JOHN J., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Relieved from duty in the Department of the Missouri, and assigned to duty in the Department of the East. Paragraph 5, S. O. 183, A. G. O., August 9, 1883.

CARTER, WILLIAM F., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Relieved from duty in the Department of Texas, and assigned to duty in the Department of the East. Paragraph 5, S. O. 183, A. G. O., August 9, 1883.

BANISTER, JOHN M., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Relieved from duty in the Department of the Missouri, and assigned to duty in the Department of the East. Paragraph 5, S. O. 183, A. G. O, August 9, 1883.

OWEN, W. O., JR., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—To proceed from Vancouver Barracks to Fort Walla-Walla, W. T., and report to the commanding officer of the latter post for temporary duty. S. O. 101, Department of the Columbia, July 27, 1883.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING THE WEEK ENDING AUGUST 18, 1883.

Surgeon GEORGE A. BRIGHT, temporary duty at Naval Rendezvous, Philadelphia.

Surgeon JOHN L. NEILSON, temporary duty on board Receiving-Ship "Franklin," Norfolk, Virginia.

Assistant-Surgeon WILLIAM MARTIN, Navy-Yard, Pensacola, Florida.

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PHILADELPHIA, SEPTEMBER 8, 1883.

ORIGINAL COMMUNICATIONS.

A CASE OF THOMSEN'S DISEASE,—A FORM OF PARESIS OF MOTION ACCOMPANIED BY MUSCULAR HYPERTROPHY.

BY HUGO ENGEL, M.D.,

Late Professor of Practice of Medicine, etc.

ONE day last May, on leaving a typical case of multiple sclerosis in which the motor impulses had suddenly selected a new path along which to travel,—an occurrence which never fails to cause great admiration of the medical skill of the attending physician,—a middle-aged German accosted me, asking my advice for his twenty-four-year-old son, of whom he gave me the following history:

C. M. enjoyed the best of health until his seventeenth year, when, as he was walking one hot summer day across the fields in the rural district of Frankford, he was overtaken by a severe storm, accompanied by thunder and lightning. He hastened to find shelter under a large tree standing isolated in a field; but when he arrived there, the thought occurred to him that such a place was considered the most dangerous for electrical discharges from the atmosphere, and he quickly left the insecure shelter. Hardly had he stepped from under the tree, when he noticed a vivid streak of light descending directly from the clouds above him into the tree. A loud thunder-clap nearly deafened him, and he noticed that the lightning had struck the tree he had just left. The young man was dazed for a moment, though just at that time he felt nothing of the effect of the lightning, beyond the intense glaring light which had nearly blinded him, and the thunder which had almost deafened him; he also said that he smelled the strong odor accompanying the discharge, which sickened him. But, notwithstanding apparently uninjured, he was scared almost to death by the narrow escape he had made; and as soon as the first shock was over, which had for the time rooted him to the ground, he tried to run away as fast as he could from the dangerous locality; but after he had run a few steps his legs suddenly seemed to him like pieces of lead; he could not lift them from the ground, and when he, now thoroughly alarmed, made a violent effort to proceed on his way, he fell down on his face. The storm had by this time ceased. Neighbors, who had been attracted by the burning tree, assisted him to his feet. After, with some effort, he had made a few steps, he found the stiffness gradually leaving, his strength returning, and himself able to walk again without support. This accident did not seem to be immediately followed by any consequences, but from that time on he often was observed suddenly to fall down. This happened the first few years about once a week only, or even more rarely; but of late, especially since he has been attending to the arduous duties of a carrier of a morning newspaper, he fell down not only every day but often several times on one day. His father had engaged the services of more than one physician, had thrown money away to more than one quack and for more than one patent medicine; but neither the advice of the professional expert nor the hocus-pocus of the panacea had improved in the least the curious complaint of his son, which, correctly in its verbal meaning, but incorrectly in its technical term, had been put down as an incurable case of the "falling sickness,"—viz., epilepsy. I will mention here, to exclude all thoughts of the reader from the latter ailment, that in none of his attacks had the patient ever lost consciousness, nor had he ever had the least sensation of vertigo.

After I had heard this history from father and son, I asked the latter to visit me some day at my office. Here I elicited the following *status præsens*.

The patient, whose parents both are healthy Germans, and in whose family neither any hereditary taint nor any neurotic tendency can be detected, is a strong, robust, physically well and symmetrically developed young man, of fair and ruddy complexion. The muscles of the lower extremities seem to be especially well developed: *i.e.*, comparing the whole frame of the patient, the muscles of the trunk and arms with those of the legs, it strikes one as if the latter are larger in volume. A careful test reveals the fact that these muscles are in reality not stronger; in short, the force which he can exert with his legs does not correspond to their great muscular development. This increase in volume is especially noted in the anterior and external part of the thighs and in the posterior muscles of the lower legs, and is simply an increase in volume, not a true hypertrophy in the usual meaning of the word.

The most careful examination does not reveal any organic affection. The urine contains no foreign substance. All the organs are perfectly normal. The pupils are perhaps a little more dilated and more sluggish than usual in their reaction to

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light; but, with the exception of this doubtful fact, the eyes presented neither in their outward appearance nor on ophthalmoscopical examination anything abnormal. The only other symptom I noted while inspecting the undressed patient before me was a certain slowness in every action of his, even in his speech and in the lifting of the eyelids, as also in the play of his features; but even these signs have a doubtful importance when we remember that they are often noted in young men of his class.

Electro-cutaneous sensibility as well as general sensation appeared normal; electro-muscular contractility was increased in the muscles of the legs; at least here the response was quicker and the contraction stronger than in the other muscles. Here I noticed also another phenomenon which I never had observed before: when applying a faradic current of sufficient strength to produce a moderate contraction of the muscles of the arm to the muscles of the lower extremities, there was simply noticed a far more vigorous contraction of the latter muscles; but when using the constant galvanic current on these and reversing the same on K.C.C. (contraction at closure with kathode, in German K S Z), a sudden and powerful *double* contraction took place, dissolving itself gradually into milder contractions.

The muscular sense was evidently impaired. I took six different dumb-bells, they weighing respectively each five, ten, fifteen, twenty, twenty-five, and thirty pounds. I first attached each dumb-bell so to one foot and then to the other (with the aid of a leather strap) that the patient was able to know the weight by looking at the dumb-bells. Here every test succeeded,—*i.e.*, the patient always indicated the correct weight, though the time intervening between my question and his answer was rather long. These experiments I repeated twice; but when I made the third test, while closing his eyes with a bandage, he invariably judged the weight wrongly, and it was remarkable *that he always indicated too high a weight.* I elicited the following answers from him:

With five pounds, he answered, "Fifteen pounds;" with ten pounds, "Twenty pounds;" with fifteen pounds, "Thirty pounds;" while with twenty and twenty-five pounds he gave, after some hesitation, the answer, "Fifty pounds;" and then, after a long pause of reflection, he exclaimed, "They must be the fifty pounds I did not try before!" He had evidently noticed before a pair of fifty-pound dumb-bells standing near the others, and which I had not tried on him at all; and so perverted was his muscular sense that he did not feel the difference between twenty and twenty-five pounds, and that in either case he was convinced, notwithstanding his previous trials, that he was lifting fifty pounds.* When I repeated in the same manner the same experiments on his arms, he always gave a correct answer.

Temperature-differences were easily felt by him; the patellar reflex was normal, but on trying the dorsal reflex a mild tremor appeared in either foot, and I was also able on faradization of the tibialis anticus to produce a typical form of Westphal's paradoxical contraction, either foot continuing in dorsal flexion. This phenomenon was immediately followed by stiffening of all the muscles of the leg, and the toes presented nearly a claw-like appearance, the large toes especially being bent strongly under the soles of the feet.† A careful observation proved also that any impression made upon the muscular sense of the lower extremities took a far longer time to travel to the centre of perception than was the case with the same impression when executed upon the muscles of the arms. I was, however, not able to discern if the response occupied more time in its way to the periphery, or if the transformation of the impression into a motor impulse was impeded or the slow conduction first indicated caused the lengthening of the time, though the fact of the retardation was well ascertained.

Except these symptoms, nothing abnormal was noticed while the patient was standing or sitting; but when I made him walk, after he had been standing or sitting awhile, the whole picture changed, and the real malady became apparent at once.

When told, after he had been standing

* Since then I repeated the same experiment on others. I always found that after two trials with open eyes every healthy person is able to judge accurately the weights with closed eyes; only the twenty and the twenty-five-pound weights are occasionally guessed wrongly.

† I may here remark that this paradoxical contraction, first observed by the great authority on nervous diseases, Westphal, should oftener be inquired after than seems to be generally the case. That it has a special meaning, and is in most cases more important than the patellar reflex, I do not doubt; but it would lead me here too far were I to enter upon this question, which I shall do somewhere else. I wish here only to draw once more the attention of my colleagues to this peculiar phenomenon.

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erect for a long time, to walk, he lifted his left leg with great difficulty; and when the front part of the foot touched the floor the thigh was bent inwardly at the hip and the leg bent backward at the knee. Then the other leg underwent the same peculiar motion; and, while this was going on, the upper part of the body swayed to and fro, a symptom which became worse the moment the other foot touched the ground; then, with steadily increasing difficulty, the same process was repeated at the next step, the swaying of the body increasing still more, and at the commencement of the third step the left foot gave way, gliding under the right leg, while the opposite took place with the right foot, so that the patient suddenly fell forward, and would have fallen on his face had he not extended rapidly his hands, which stopped the forward fall, and left the individual in a position similar to that which tailors are apt to occupy when sewing on the bench. When I made him walk, after he had been standing a *long* time, say ten minutes, he was not able to commence the second step. As soon as the first foot had touched the ground, and while the second was in the act of doing so, both legs would at once give way under him, and he would fall forward.

Almost the same phenomenon happened after he had been sitting awhile, only that then the upper part of the body swayed to and fro, from the moment he arose, and before he made the first attempt at locomotion; and when he had been sitting a *long* while, then he also fell upon the first attempt at walking, but was apt to fall backward, which he usually prevented by rapidly extending his hands backward, when, instead of falling the whole length, he would find himself sitting on his gluteal muscles, and with a rather heavy shock to his coccyx.

While he made the attempt to walk, all his flexors seemed to be almost in a state of contracture; his toes were bent almost claw-like, so that they touched the ground first.

After he had received this involuntary set-down, he was not immediately able to get up without assistance. Were assistance given him, he rose slowly; then, with a little swaying of the body, he walked a few steps, and after that he would step and walk in the same normal manner and with the same ease as any healthy individual.

If left alone, he would usually continue in the sitting position for a minute or two; then he rose with almost a jerk, tottered one or two steps, then walked a step or two, heavily treading the floor, and after that walked normally.

If, while standing, he frequently changed his position from one foot to the other, he felt, on beginning to walk, a slight heaviness only, after which he walked normally. The same if he sat on a chair, changing his position frequently; when then arising, the first one or two steps were made with an effort, as judged by the heavy tread, and then no further disturbance took place.

While walking, even at a rapid gait, nothing abnormal could be noted, nor did he feel anything abnormal; but the moment he endeavored to run, his legs, especially first his calves, then his knee-joints, after that the thighs, and lastly the hips, would feel like lead; then they would become stiff, and, when this sensation had reached the hips, the lower extremities would refuse any further motion: he was forced to stand still. But hardly had he done so, when his legs gave way under him, and only the rapid extension of the hands saved him from falling on his face. One leg would always glide under the other.

After I had read the interesting article of Dr. Schönfeld,* which I shall mention again below, I made the patient stand erect, and then endeavored to make passive motions with his legs. I found a peculiar resistance to such motions; the muscles seemed to become hard, and they and the joints to become unyielding, as if the patient made a violent effort to oppose the motion; but while, if such had been the case, sudden contractions would have been noted, extending over all the muscles at once, as every one can convince himself by trying, here a gradual, slow, and even hardening and stiffening of the muscles, extending gradually from below upwards, set in, which evidently was utterly out of control of the patient.

I also tried the experiment recommended by Schönfeld, to give the patient suddenly a moderately hard push after he has been standing awhile, but found nothing more peculiar than the phenomenon produced when he had attempted to walk, the process being really the same,

* Ein Fall von Thomsen'scher Krankheit, v. Dr. Schönfeld, Assist. Arzt, etc., Berl. Klin. Wochenschr., 1883, July 2.

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with the only difference that what in the one case he wants to do or is told to do he is made by force to perform in the latter case.

I also observed, when trying passive motions, that the more rapid the motion the more quickly did the morbid response —*i.e.*, the stiffness of the muscles—set in.

Regarding Westphal's* observation concerning dancing, the patient informed me that he had never learned it, and neither did he like it, because when once, a few years ago, he made an attempt at dancing, he felt the same stiffness, and, being afraid of falling down and making himself ridiculous, he had given up all idea of dancing; but one day he met with a peculiar accident, which might have cost his life, but perhaps saved it. He was riding a horse for the first time after the fright, when he suddenly felt the stiffening setting in. Evidently by the pressure of the heels upon the horse's sides he irritated the beast, which at any rate was a rather vicious animal, and it ran away with him. He was by no means an expert rider, and he told me that he would surely have fallen from the horse had not his legs taken an almost iron grasp on the horse, so that he sat like a statue, until a police-officer, attracted by his cries for help, stopped the animal. The patient could only with difficulty be lifted from the horse, and they at first considered him drunk until he had explained his peculiar situation. But the incident was a warning to him: he never again rode on horseback. He gave also a peculiar reason for the accident, which, in the light of Westphal's remarks,† may well be considered a plausible one. He said that at the beginning of the ride he noticed nothing wrong; but after the horse had shied once, and knowing it to be a vicious animal, suddenly the thought occurred to him what the consequences might be were he to be suddenly attacked by his disease while sitting on the horse. The very idea made him shiver, and hardly had he thought of the possibility of such an occurrence when the dreaded symptom appeared, and he ascribes the accident in this case to the psychical influence of the fear.

There is—and this makes the case more obscure and remarkable—no affection of the arms, though the patient informed me that occasionally during the last year or two, when performing some hard work with his arms, it seemed to him as if he experienced a drawing sensation, as if stiffening were about to take place. He has since been very cautious in not executing any hard labor with his upper extremities. Otherwise, sensation as well as motion gives a normal response to every stimulus: there are no other subjective morbid sensations. The patient feels well, has a splendid appetite, digestion is undisturbed, the bowels move regularly, the sphincters are normal, and he sleeps well. It should be noted that in the morning, after a good night's rest, when the patient arises from bed he has no difficulty whatever with the muscles of the lower extremities; he experiences no stiffness, but at the same time they are in no better condition either. If, for instance, he stands long before the looking-glass in the morning, on attempting to walk the morbid phenomena immediately appear, their severity depending upon the length of time he stood immovable. Apart from the other symptoms and signs, the facts just mentioned would prove that neither a congested nor an anæmic (irritated) state of the spine can in any way be responsible for the pathological symptoms. I hardly need to call the attention of the reader once more to the fact that the patient never for a moment loses consciousness.

What, then, is the nature of the disease? After I had first examined the case, I must confess I was at a loss to make a diagnosis. Notwithstanding a considerable experience in the largest hospitals and clinics of the world, and notwithstanding an extensive reading, I did not remember having ever heard, seen, or read of any similar case; but it came back to me that, a few months before, I had put away for future study the article of Westphal, cited several times above, giving a description of two cases of a peculiar muscular affection, the cases having been presented by this eminent authority on nervous diseases to the Berlin Medical Society.‡ After having read this article carefully, it was clear to my mind that the case of C. M. was one of Thomsen's disease.

Leyden, in his exhaustive work on spinal

* Zwei Fälle von Thomsen's Disease, Berl. Klin. Wochenschrift, No. II., March 12, 1883, by Prof. Dr. Westphal.
† Loc. cit.

‡ From the same instructive article, written with that clearness and thoroughness for which the author is justly celebrated, I gained many of the facts I now quote.

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disease, is the first who makes mention of this disease, and he classifies it under spastic affections. But Dr. Thomsen, in Kappeln, who, besides other members of his family, himself suffered from this malady, was the first to give a graphic description of the disease and of all its salient points.* After his publication there were reported, each, one case by Bernhardt, Seeligmüller, Stümpell, Erb, Peters, and Petrone. To these six cases come the two of Westphal, then the one by Dr. Schönfeld, and lastly my own, the tenth case on record.

"The main symptom of this disease," says the great neurologist Westphal, "consists in the fact that the active motions of such persons, under certain circumstances, are impeded by a tonic contraction of the muscles." When such patients have been standing or sitting awhile, the joints become immovable, in consequence of the rigidity of the muscles. The same takes place after a greater muscular exertion and during complicated motions. This tonic spasm might also develop itself after sudden and unexpected irritations, as, for instance, from accidentally striking the toes against a stone. Psychical influences may do the same. Cold weather seems to favor the appearance of the morbid symptom, heat to decrease its severity.

Usually all the voluntary muscles are affected. In my case only the muscles of the legs were prominently suffering, somewhat more those of the trunk, very mildly those of the face, and doubtfully so those of the arms. The disease is said to be hereditary; but, with the exception of a certain slowness in speech and of a general sluggish movement on the part of his father, no other members of my patient's family seem to have been the victims of this malady.

Any morbid sign the patient exhibited I have recorded; besides those mentioned, the most careful examination failed to reveal anything. As in Schönfeld's case, so also in mine, a sudden fright seems to have been the pathogenetic cause of the disease.

Of the real pathology of the latter nothing is known. At no time—neither during rest nor during activity, nor while the muscles are rigid—is any change of color apparent in the integument; the function of the skin is not altered; the blood-supply, to all appearances, is normal. The vaso-motor nervous system is evidently not responsible for the symptoms. There is, however, a somewhat similar physiological phenomenon, though milder in degree. A person running very hard and beyond his endurance will, after a certain time, suddenly notice his lower extremities becoming like lead; if the exertion has been carried too far, the muscles will feel hard to the touch; should the exertion be forced still more, the legs will give way and the individual will drop down exhausted, as I had occasion to observe in one case: the runner will suddenly stop, unable to lift a foot. Of course I do not mean to convey the idea that both phenomena—the physiological, after overstraining, and the morbid, mostly after rest—are the same. That, however, there is a certain analogy between them cannot be questioned. When we think again of the pathogenetic cause in Schönfeld's and my own case, sudden fright, and remember that often very slight and also psychical causes may suffice to call out the morbid symptoms; further, if we reflect over the fact that the disease most frequently begins during the earliest development of childhood, and always at a very young age; and, lastly, that when the patient has continued one motion for a short time no abnormal phenomena can be detected, it appears probable that the seat of the disease is situated in one of the automatic centres of motion, perhaps in the pons, the main centre for automatic motion and progression, and that some disturbance of circulation at this locality causes the appearance of the morbid symptoms. This is simply a theory, for which I possess no proof.

Trophic disturbances do not take place; at least I believe that the increase in volume of the affected muscles, mildly expressed in my case, more severely in Westphal's cases, can be accounted for by the repeated tonic spasms and the rigidity from which these muscles have to suffer so often. It is therefore simply an increase in size, due to the greater demand made upon this muscular tissue. What the real nature of the lesion may be is difficult to say. In my case, at least, the affection commenced suddenly, and its beginning could be traced to a fright acting while the person was undergoing a hurried and

* Arch. f. Physiol. und Nervenkrankh., vi. 3, 1876.

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severe muscular strain. Nearly as sudden was the commencement in Schönfeld's case: so that it does not seem probable that an anatomical change in the muscular tissue itself should be the primary lesion, as Westphal seems to think, notwithstanding he himself remarks that in one case, in which an examination was made for the purpose of elucidating this point, the result was negative. All the cases commenced at a very early age,—Schönfeld's at the age of about twelve, mine at that of seventeen. In every case the disease reached its height almost at the beginning; muscular strain alone seems rapidly to aggravate it. But, while I give these facts for what they may be worth, I well know that careful post-mortem dissections alone will be able to throw light on the nature of this malady.

Regarding treatment, nothing seems to be of any avail. After having taken for two weeks Turkish baths, and been manipulated for the same length of time, in my case, too, a transient improvement took place; but after this the symptoms returned with the same vigor and in the same frequency. As the patient had once been benefited by a trip on a steamer to Boston, I suggested a sea-voyage. The proposition has been accepted by the patient sailing to Europe. From the last letter I received from him, I learn that no amelioration has taken place.

507 Franklin Street.

A CASE OF CHRONIC LEG-ULCER CURED BY AN ATTACK OF PHLEGMONOUS ERYSIPELAS.

BY B. F. NICHOLLS, M.D.

ON the 1st of February, 1883, I was called to see Mrs. S., a stout lady, aged 72 years, whom I found lying in bed suffering with intense pain in her left leg. The limb was much swollen, hot, red, and glistening, the swelling extending from the toes to within an inch of the knee. Anterior and a little to the left of the tendo Achillis was an old ulcer, about the size of a silver dollar, the edges of which were thick and hard; the surface was a very pale pink color. Her pulse was 100; axillary temperature, 103° F.; respiration, 40; skin hot and dry; tongue coated yellowish-brown; nausea and vomiting; bowels constipated.

I diagnosticated erysipelas with attendant gastritis. The treatment consisted of tinctura ferri chloridi, twenty drops, in water every two hours; to allay the vomiting, lime-water and milk *ad lib.*; and as a local application, a lead-and-opium solution. At my next visit the patient was a great deal worse; she could neither take the iron nor the milk; in fact, she could not take a teaspoonful of water without vomiting. I stopped the iron and ordered one-sixth of a grain of morphia to be placed on the tongue. On the 2d she was a little better, and I tried the iron again, but was compelled to discontinue it after the second dose, on account of sick stomach. I then ordered her one tablespoonful of milk, one tablespoonful of lime-water, and a teaspoonful of gin, every hour. From this time she gradually improved until February 7, when I gave her, every two hours, quinia, half a grain; tinctura ferri chloridi, five drops; glycerin, one drachm, in a mixture. She now took half a pint of milk, with one ounce of gin, every three hours. On the 10th of February the inflammation in the leg had extended to the areolar tissue, assuming a phlegmonous character; the ulcer seemed deeper, and was considerably inflamed. She told me the ulcer had been there for fifteen years, but had never given her much trouble, though it would never heal. I now increased the quinine to two grains, and the iron to twenty drops in one drachm of glycerin every two hours, and continued the lead-and-opium solution locally. On the 15th of February I found three large abscesses on the anterior aspect of the leg. I incised them and gave exit to half a pint of fetid pus. At her solicitation the lead and opium were now stopped, and I allowed her to use cranberry poultices, which did no good; the abscesses continued to form from two to five a day, the discharge from which became so offensive that I ordered her leg washed twice a day with a solution of permanganate of potassium, which removed all odor. I now had the leg dressed with carbolic acid and zinc ointment, a drachm to an ounce. On the 23d of February the calf of the leg was very much swollen, tender, and boggy, and I began to fear it would slough out. I ordered a hot flaxseed-meal poultice to be put on over the zinc ointment, covering the whole swelling. On the 24th of February the pus had broken through the old ulcer and

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was discharging quite freely. From this time on till the 1st of May my patient slowly but gradually improved, as she continued taking quinine and iron, milk-punch, and beef-tea. The abscess in the calf continued to discharge, and after its first break through the ulcer there was but one other abscess on any other part of the leg. The carbolic acid and zinc ointment having been continued, and no other dressing having been used, on the 1st of May I found the ulcer had become quite flat at its edges, pouting in its centre where the pus had made its exit. By May 15 the abscess had ceased to discharge, and the ulcer had decreased to the size of a three-cent piece. I now stopped the quinine and iron mixture, and ordered acid muriat. five drops in water three times a day; the patient was allowed to get up, dress, and sit round the room. From this date she steadily improved, until on June 1 she could walk up and down the stairs without any trouble, her leg entirely well, the ulcer healed, and nothing remaining save a little stiffness in the ankle-joint. At this time, July 30, she is entirely well, no stiffness, no ulceration, and she is able to walk without assistance.

THE RATIONALE OF THE LOCAL TREATMENT OF DIPHTHERIA.

BY CHAS. S. DOLLEY, M.D.

WHATEVER their peculiar views regarding the exact etiology of diphtheria, it remains true that the majority of medical authorities, as well as the rank and file of general practitioners, rely largely and wisely in their treatment upon frequent local antiseptic applications.

It has come to be generally admitted that the *micrococci* of diphtheria are something more than the mere commensals to be found at any time feasting upon the nutritive fluids of the alimentary tract.* While some still deny a specific nature to the so-called *micrococci diphtheritica* (they being morphologically identical with non-pathogenic forms, and absolutely undistinguishable from the "permanent spores" of other species), few deny that they are in some way intimately connected with the origin and progress of the disease, the rapidity of their growth being in direct proportion to the malignancy of the case and its contagiousness.† While the primary symptoms of diphtheria are apparently systemic, the exciting cause of these symptoms is a local inoculation with some septic material, the result of a specific fermentation;‡ the micrococci being either "physiological varieties," "ferments of contagion,"§ or harmless varieties upon which for the time being phlogogenic or septic properties have been conferred as a result of peculiar environments during successive generations, they being "only injections after they themselves have been injected.‖

Local applications are found to be of greater value early in the disease. In the more advanced stages, when the micro-organisms have found their way into the lymph-spaces and accumulated in the blood itself, reliance is mostly to be placed upon alcoholic stimulants and easily-assimilated aliments.

Let us see what it is we have to deal with, and why it is that early topical antiseptic medication gives such favorable results. The aphorism propounded by William Harvey,¶ that "everything living comes from an egg," holds as true now as ever, and among micro-organisms as among higher forms, and it has been repeatedly proved that adult bacteria produce, and are in turn produced from, spores or germs. The peculiar hardiness of this sporadic stage, the vast difference between the amount of vitality exhibited by the adult microbes and their germs, is very striking. The former may be destroyed by comparatively feeble measures. A heat far below the boiling-point is generally sufficient (70° C., 158° F.) to kill all bacteria. Desiccation destroys all adult forms in a short time; some cannot withstand oxygen, others are paralyzed by carbonic acid gas, and very dilute solutions of antiseptics serve to destroy them.

In fact, it has been demonstrated** that

* Butlin, "On the Nature of the Fur on the Tongue." Proc. Roy. Soc. London, vol. xxxiii. p. 484. Also Rappin, "Des Bactéries de la Bouche." Thèse de Paris, No. 144, April, 1881. Also Sternberg, "A Contribution to the Bacterial Organisms commonly found upon Exposed Mucous Surfaces and in the Alimentary Canal of Healthy Individuals." Trans. Am. Soc. for Advancement of Science, 1881.

† Wood and Formad, National Board of Health Bulletin, Sup. No. 17, p. 18.

‡ Perhaps an alkaloid analogous to the "sepsine" described by Bergmann as the product of the *vibrio* of human septicæmia. *Vide* Bergmann, "Le Poison putride et l'Intoxication putride," Dorpat, 1875.

§ Pasteur's "Vital Theory."

‖ Billroth, "Untersuch. ueber die Vegetationenformen von Coccobact. septica." Berlin, 1874.

¶ "Exercitationes de Generatione Animalium," 1651.

** Wernich, "Die Aromat Faulnissprodukte in ihrer Einwerkung auf Spalt- und Sprosspilze," Arch. Path., Anat. und Phys., lxxviii. p. 51–83.

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the bacteria themselves prepare the conditions for their own destruction, and that very slight quantities of the poison so generated protect against infection by new organisms of the same variety. We have here a possible explanation of the self-limitation, or natural course, of contagious diseases.

The germs, on the contrary, exhibit a great resistance to every method devised for their destruction. They may be boiled, or dried, almost indefinitely, subjected to the action of various acids, alkalies, and antiseptics, digestive principles, and poisons, without apparent effect, the actual flame affording the only sure method of extermination.

It is to these robust little germs that we owe the dissemination of diphtheria and other contagious diseases, not to the adult or active form.

Numerous experiments upon the floating matter of the air prove the absence of adult forms and the existence of large quantities of germs. One observer has said,—

"It ought, I think, to be steadily borne in mind that the complete *bacteria*, and the atmospheric matter from which they spring, are in general different things. I have carefully sought for atmospheric *bacteria*, but have never found them. They have never, to my knowledge, been found by others; and that they arise from matter which has not yet assumed the bacterial form is, as just shown, capable of demonstration."*

Let us suppose a patient comes to one of us, exhibiting symptoms characteristic of diphtheritic invasion; he is congratulated upon having given the matter early attention, and makes a quick recovery under some one of the many local treatments, combined with proper hygienic and dietetic care. The rationale of this rapid cessation of symptoms, our success in averting a severe sickness, is, I believe, best explained by adopting Dr. Cameron's lucid explanation of Prof. Tyndall's experiments with hay infusions.†

The morbid germs which have been deposited upon portions of the respiratory tract of our patient are in different conditions as to age, desiccation, exposure to air, light, etc., and they will naturally require different periods for germination. While they remain spores they will resist all our germicides, our pencillings, atomizations, and gargles; but allow them to germinate, and deal with each successive crop as it is springing into life, and we find our victory an easy one. It is likewise plain how any solution which will kill the developed microbes can preserve that portion of the mucous membrane with which it comes in contact from the development of microbes. It may not kill their refractory germs, but it will kill them off in detail as they assume a fully-developed state.

Prof. Tyndall took infusions, infected with spores, or germs, derived from old hay, on which many hours of continuous boiling had no effect, and found that by boiling a single minute, or fraction of a minute, at intervals of a few hours, he could, with an aggregate of five minutes' boiling, sterilize the most refractory infusion. The cases are analogous. By oft-repeated applications of antiseptic solutions we are enabled to suppress the successive crops of active germs before they have had an opportunity to work severe systemic derangement. We can, at least, control them within limits of safety to our patient.

If, on the other hand, we allow development to go on without check, we find the infected area extending so rapidly that it is soon almost inaccessible to local applications, and the whole system becomes imbued with the septic products. Once finding their way into the leucocytes and tissues, these almost indestructible germs evolve myriads of active forms, overcoming, in the great majority of cases, the reactive power of our patient.

Early and frequent topical antiseptic applications, together with measures calculated to allay the inflammatory action set up, seem to constitute the rational therapeusis.‡

It should be borne in mind that the idea of antiseptic remedies, administered *per orem* or hypodermically, being able to destroy undeveloped germs, is a mistaken and mischievous one; and Prof. Tyndall

* John Tyndall, "Essays on the Floating Matter of the Air in Relation to Putrefaction and Infection," 1882, p. 82. *Vide*, also, Wood and Formad, loc. cit., p. 5.

† Charles Cameron, Paper read before the Philosophical Society of Glasgow, December 14, 1881, entitled "Microbes in Fermentation, Putrefaction, and Disease."

‡ In the writer's opinion, this is very nicely accomplished in children by the use of medicated ice; any favorite solution being readily frozen by immersing test-tubes filled with the same in a freezing mixture of salt and ice, the cylinders of medicated ice being easily removed from the tubes by dipping in warm water.

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hits the nail on the head when he says, "If the seeds of contagious diseases be themselves living things, it may be difficult to destroy either them or their progeny without involving their living habitat in the same destruction."*

The writer is cognizant of a case in his own city where sudden collapse and death followed the hypodermic injection of a solution of carbolic acid by a young graduate of a neighboring medical college, who remarked, "Having here a germ disease, a case of blood-poisoning, we must combat it with antiseptics." He did so; the young patient survived but a few minutes; whether the micrococci perished also was not ascertained.

There is a time for all things. Let practitioners learn to use antiseptics and disinfectants intelligently and with discretion. The necessity of a systematic investigation of the long list of remedies recommended as topical applications in diphtheria will be apparent from a recent paper, by MM. Guyon and Dupetit, read before the French Academy of Sciences, according to which a microbe, which their experiments show to be the cause of the reduction of nitrates, not only tolerates strong solutions of phenic and salicylic acid, but ferments them with as little concern as yeast ferments sugar. This shows that, as with mankind, one microbe's food is another's poison.

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SOME THOUGHTS CONCERNING OLD REMEDIES NOW CONSIDERED ALMOST OBSOLETE BY PHYSICIANS,—TARTAR EMETIC, FOR EXAMPLE.

BY HARVEY L. BYRD, M.D.,

President and Professor of Obstetrics and Diseases of Women and Children in the Baltimore Medical College, Baltimore, Md.

WHILST the present age may be considered generally as a progressive one, and in a great many respects is really such in fact, as may be seen in the numerous accessions that have been made in the various arts and in many departments of science likewise, which are seemingly permanent additions to what was known before, and, therefore, calculated to benefit mankind in various ways, yet so far as it relates to the medical profession it cannot be properly regarded as a utilitarian one, certainly not in the broad acceptation in which some have thought proper to apply that term to the advancements taking place in the latter half of the nineteenth century. Hence we pause to consider that it is lacking in conservatism, in our calling at least, in a conspicuous degree.

The adaptation of means to ends that so generally marks discoveries as they are utilized from day to day at the present time, in a manner and to a degree probably never equalled before in the various arts and sciences, including medicine, would seem to indicate that an attempt like this to revive an old remedy and bring it prominently before the profession would be truly "a work of supererogation."

But when the thoughtful mind reverts to the great benefits it has seen result from *tartar emetic*, and contemplates and compares the action of the remedies that have been substituted for it and the results obtained, there will be found sufficient reason to "give us pause," and to ascertain whether our great zeal in behalf of *new remedies* is not causing us to drift away from that which is good to that or those remedies which are no better at least than it is, and whether or not the tendency of the profession is to ignore many other old remedies and useful experiences of past ages, and press them to the rear, where they have not been actually forgotten, when making plans for new discoveries or new facts in the healing art. Again, it may be observed of a few modern remedies even, or those of comparatively recent introduction, that the tendency in some instances is to permit them to fall still-born ere sufficient time is given for their proper development or utilization, because unsupported by the sanction of a great name, in order, seemingly, to afford larger space for others that appear to offer more brilliant prospects of usefulness to the profession or a wider fame to the discoverer.

Whilst always ready to remove obstructions and to facilitate progress and discovery by all proper means, I often think that more enduring and substantial results would be certainly reached if we could delay just long enough to "prove all things and to hold fast only to that which is good" in medicine, as is done in almost all the other departments of human affairs.

I am emboldened to step to the front in

* John Tyndall, loc. cit., p. 42.

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the advocacy of *tartar emetic*, from seeing the good effects upon the profession that followed an article I had the temerity to publish in the *Medical and Surgical Reporter* of Philadelphia, in 1872, entitled "BLOOD-LETTING IN DISEASE."

I am thoroughly satisfied, after four decades of experience as a physician engaged in active professional work, that, next to blood-letting, the tartrate of antimony and potash is absolutely without a peer or rival as an antiphlogistic agent in our therapeutic resources, and that it may in some cases be substituted for blood-letting, even, without detriment, when certain circumstances or conditions do not absolutely demand the use of that old and peerless remedy in inflammation.

I am conscious of the import of the language I am using, and desire that I may not be misunderstood in regard to it. And I wish to add, still further, that, like blood-letting, the *necessity* for its use in practice is now as great as it ever was at any time in the history of the article. After venesection, in acute inflammatory affections, I have found it produce its most strikingly marked beneficial effects, and feel fully warranted in saying that the most sceptical member of the profession would not doubt its wondrous power for good could its action be observed in a single case. But, as already stated above, its field of usefulness covers absolutely all cases of febrile and inflammatory affections that are unattended with inflammation or considerable irritation of the gastric mucous membrane. Those conditions only contra-indicate its internal employment in any form of disease whatsoever, or in any pathological condition attended with a full or even moderately tense and quick pulse, with dry skin and paucity of the secretions generally. It will be seen from these statements that, with the single exception of calomel, it is capable of doing good in a larger number of diseases than any other remedy in the hands of the medical practitioner. With these remarks I might conclude this paper, and, were I not aware of the fact that there are a large number of practitioners who have never used the article at all, would probably be inclined to do so. But for the use of such, and of those who have permitted other and more recent articles to monopolize its place in their therapeutic resources, I feel that the interests of science demand that a few more words should be added regarding its mode of administration, etc.

In doses of from one-eightieth to one-tenth of a grain, alone or in conjunction with opium or one of its salts or preparations, I expect good results from it when given as an antiphlogistic or antipyretic, expectorant, diaphoretic, diuretic, or as an alterative. I never prescribe it as an emetic, unless no other article of that class is convenient, and am not prepared to speak of its *tolerance*, as mentioned by Rasori many years ago, in acute diseases from personal experience. Thus, I find it a valuable agent in most forms of fever, in bronchitis, in pneumonia, in croup and laryngitis, in torpid conditions of the liver, in certain chronic cutaneous diseases, and in sick-headache, etc. It is as valuable in lessening the force and frequency of the circulation as veratrum or aconite, and, being tasteless in the proper dose, is almost absolutely free from disagreeable or unpleasant effects, and thus is generally preferable to either of them.

The foregoing strong commendation of tartar emetic in this paper will be endorsed, I feel quite sure, by those practitioners who would preserve the old landmarks in our therapeutics, and are unwilling to drift too far away from the moorings of well-tried experience, merely to follow fashion or for the sake of novelty in practice. And if it should prove the means of adding a most valuable and trustworthy article to the therapeutic repertory of a physician unaccustomed to or inexperienced in its use in the treatment of his patients, another most important object will have resulted from its preparation and its publication in the *Medical Times*.

BALTIMORE, 127 NORTH ARLINGTON AVENUE.

THE ETHER DOUCHE OR LAVEMENT FOR LOCAL PAIN.

BY C. H. HUGHES, M.D.

A PARAGRAPH in the *Medical Times* of the 10th of February, 1883, referring to the ether spray in the cure of neuralgia, prompts me to call attention to the fact that ether lavements have been employed by me in all painful surface-affections for many years, whether with or without inflammation, but mainly in neuralgic affection. In facial, sciatic, and cervical neuralgias, no

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remedy except galvanism has given me such signal satisfaction during the past ten years of my practice in neurology. These lavements will cure some cases of recent origin; they will relieve all. I use the ether douche, not the spray, and Dr. McLane Hamilton is in error in his reference to my treatment of the intense pain of cerebellar abscess by ether spray. In the case referred to, which I reported in 1877 (*Journal of Mental and Nervous Diseases*, October), I simply poured the ether on the head so copiously as to benumb all sensibility and restore a state of ease and mental tranquillity to a patient absolutely maddened with pain.

The ether douche or lavement in trigeminal neuralgia is quite uncomfortable to many persons, on account of the unpleasant impression of the ether on the nose and eyes; and when applied to the supra-orbital region great care should be taken to keep the ether out of the eyes by laying the head back and covering the eyes with a handkerchief. If the ether should get in the eyes, the patient should be cautioned not to rub them, but simply to sponge the eyes with cold water and wait patiently till the ether evaporates. The same is true in regard to ether getting in the ears.

There is no need of a spray apparatus for ether. It should be used freely in quantities adequate to the effect desired. It should be poured on the part till relief is obtained. I apply it in this way to the motor regions of the head and down the spine in general or unilateral chorea likewise.

No better agent can be employed for cephalalgia and for acute muscular tremor than the ether douche or lavement. Of late years I have heard of the ether spray, but the ether *douche* or lavement has been with me a most common and efficient agent in the local therapy of pain, especially superficial pain, for more than a decade, ranking with electricity, and better than mechanical vibration.

A CASE OF POISONING BY BELLADONNA—RECOVERY.

BY B. F. NICHOLLS, M.D.

MRS. C., aged 45 years, on Sunday, August 5, drank a pint of coffee into which some kind friend had surreptitiously placed some belladonna-leaves. Soon after she had swallowed the coffee, symptoms of poisoning set in. I did not see her until two and a half hours had elapsed: when I arrived, the following symptoms were present:—tingling in every part of the body; burning and itching of the skin; subsultus tendinum very marked in upper and lower limbs and neck; great numbness, dryness, and constriction of the throat; deglutition very difficult; tongue dry and swollen, turned up at the edges, and protruding slightly between the teeth; the teeth chattered as if she had a chill; great thirst, but could not swallow when water was given; retching continuously; pupils widely dilated, eyes exceedingly sensitive to light; pulse slow and weak; considerable eruption on body and limbs.

The treatment consisted of morphia sulph., hypodermically, one-quarter grain at first and one-eighth grain in fifteen minutes. After the first dose my patient began to improve, and after a few doses the symptoms subsided entirely, leaving her very much prostrated, when I ordered brandy. I kept her under the influence of morphia for twelve hours, giving one-eighth grain every two hours by mouth. I also kept up the brandy for the same length of time. My patient entirely recovered without any trouble remaining.

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NOTES OF HOSPITAL PRACTICE.

HOSPITAL OF THE UNIVERSITY OF PENNSYLVANIA.

CLINIC OF WILLIAM GOODELL, M.D., PROFESSOR OF GYNÆCOLOGY IN THE UNIVERSITY OF PENNSYLVANIA.

Reported by WILLIAM H. MORRISON, M.D.

OPERATION FOR LACERATED PERINEUM IN AN INSANE WOMAN—COMPLETE SUCCESS, ALTHOUGH THE PATIENT WOULD NOT REMAIN IN BED, AND THE BOWELS CONTINUED LOOSE THROUGHOUT THE ENTIRE TREATMENT OF THE CASE.

GENTLEMEN,—The first patient that I shall bring before you is the insane woman on whom I operated for lacerated perineum two weeks ago to-day. You will recall the case: her insanity had resulted from her malady. She was unable to go to church, she could not make calls, nor could she go on the street-cars, for fear that she would break wind or have an involuntary evacuation from the bowels. These things so preyed upon her mind that she became crazy. She was brought to me by the superintendent of the asylum in which she had been confined. I operated before

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you. I show her to you, in order that you may learn of the progress of the case. Since the operation she has behaved outrageously. The first thing that she did on coming from under the influence of the ether was to tear away the bandage that confined the knees, pull out the self-retaining catheter, and toss about the bed. That night she got out of bed and walked about the ward. She did the same the next night. She was finally bound in bed, but she made so much noise that she was loosened, and I made up my mind that the operation would be a failure. In addition to the drawbacks which I have mentioned, the bowels were opened several times a day for some time after the performance of the operation. I removed the stitches a week ago, and, to my surprise, found excellent union. It appeared to be perfect; but she resisted so violently that I was unable to decide positively whether or not there was a recto-vaginal fistula. I shall now examine her before you. As you see, there is excellent union. There is no recto-vaginal fistula. At the upper part of the wound there is a little portion that has not perfectly united; but this will heal by second intention in a short time under applications of nitrate of silver. There is now a perfect anus, but she will not at once obtain complete control over the bowels, because the sphincter, long idle by disuse, will need to be educated to the performance of its duties.

This has been an interesting case, and it has opened my eyes to one thing, which I shall follow out in the future. There is a diversity of opinion among surgeons in regard to the question whether after an operation of this kind the bowels should be kept constipated or be opened every day. The great majority of operators, including myself, prefer to keep the bowels bound for nine, ten, or more days. This plan has been very successful, but it is always an anxious one, and sometimes a tear results from the first movement of the bowels. A smaller number of operators, especially English surgeons, have suggested the propriety of having the bowels moved daily, and they contend that under this treatment the operation has been equally successful. My objection to accepting their statement was, that, from the description of the operation as performed by them, I had inferred that the perineum which they obtained was simply a cutaneous perineum and not a good solid one. But, with the experience gained in this case, I shall in future adopt the laxative plan.

In this woman everything militated against the success of the operation: the bandage was torn away from the knees, the self-retaining catheter pulled out, the patient was constantly on her feet, even walking about the ward, and then the bowels were open every day, but they were quite loose. The result has been excellent union. Of course I do not intend to allow patients to get out of bed, nor shall I give up the use of the self-retaining catheter and the binding of the knees, for common sense tells me that these are proper precautions to be adopted; but there may be something in the opening of the bowels, and, as I have said, I shall try it in my next case of lacerated perineum.

Whether or not she will regain her reason I am unable to say. In considering this point we meet the question whether insanity is always due to a ponderable lesion of the brain: is it a definite expression of some morbid cerebral action, or is it a sheer intellectual failing? This is an important question. The great majority of alienists are what are called materialists. They consider that cerebration is a secretion,—that the intellect is as much generated from brain-cells as electricity is from battery-cells. They therefore believe that in insanity there is positive, actual disease of the brain-cells, which must be cured before reason will return. Others consider insanity to be an intellectual disease; that the intellect is something apart from the brain, an abstract entity, and it is not a mere secretion of the brain, but an endowment. If this woman has a positive, tangible lesion of the brain, she may never recover her senses. If, on the other hand, the insanity is due to a perversion of the intellect, to a mental impression without any positive actual brain-lesion (if this be possible), the probability is that she will get sane. I confess that, being in doubt under which banner to range myself, I, like a free-lance, fight under that one which at the time offers the highest bids. There are strong arguments advanced on both sides. We know that positive, ponderable, and microscopic lesions will produce insanity; on the other hand, we know that there are cases in which no instruments of precision which science has yet devised have been able to discover a lesion.

While upon this subject, I wish to refer

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to the case on which I operated three weeks ago. It was a case of prolapse of the womb. I operated on the perineum. This was an entire success. She bore the stitches wonderfully well. Three days after the removal of the stitches she became furiously maniacal. She began to use the most abusive and filthy language, and was continually jumping out of bed. It at last became necessary to remove her from the ward to a room in the lower part of the house. We have tried to find her friends, but have, as yet, not succeeded. She is still quite violent. I believe that she was insane before, and that she was brought here with the object of getting rid of her.

MENORRHAGIA OCCURRING IN A GIRL OF FIFTEEN.

The next case is one of special interest to me, because it illustrates a condition by which I have often been puzzled. I have, as yet, not made an examination.

This is an orphan girl, who has been bound out to some kind people in the city. She is about 15 years old. Menstruation began one year ago, and has gone on increasing until it has become menorrhagic. She now loses so much as to weaken her. I have seen this condition repeatedly in young girls, and I have often been puzzled to find the cause of it. It is sometimes due to congenital anteflexion. The anteflexion being excessive, there is strangulation of these parts, and as a result there is too great an amount of venous blood in the womb. The arteries present a greater resistance to pressure than the veins; consequently pressure that will occlude the veins will not occlude the arteries, and there is thus produced venous stagnation. In blood-letting we put a bandage on the arm to compress the veins, but not the arteries, and we get thereby a free flow of venous blood. We can, in a measure, do the same thing by forced flexion of the arm. In the same way there are cases in which anteflexion of the womb produces strangulation and hemorrhage from distention of the veins. On other occasions I have been unable to discover the cause of the bleeding. I have not found vegetations, and we should not expect to find them, in these cases. I have, at times, been forced from sheer ignorance to say that the hemorrhage was due to thin blood. There are, as you know, certain cases in which epistaxis occurs without our being able to discover any cause for it, and the tendency to this form of hemorrhage is very often inherited. This condition is termed hæmatophilia. In persons with this disease the prick of a thorn or the scratch of a pin will continue to bleed for a long time, and the extraction of a tooth may be followed by fatal hemorrhage.

While the patient is being etherized, let me make a few general remarks on the treatment of hemorrhage from the womb. There is one point which I wish you to remember, for it is a good wrinkle,—that is, the efficacy of curetting the womb during the flow. You have given ergot without any effect. You have tried the oil of erigeron, which will often act like a charm. This is, however, an exceedingly disagreeable medicine. It is best given in capsules, one every hour. These failing, you try gallic acid, in doses of ten grains every one or two hours, or vaginal enemata of hot water. Suppose that after you have done all this the bleeding still continues, you should then use the dull curette. If the cervical canal is too small, enlarge it with the dilator, then pass in the curette and scrape with some force, but with gentle force, over the whole of the cavity of the womb. I know of nothing so efficacious in menorrhagia or metrorrhagia. Let me here define these terms. Menorrhagia is too great a monthly flux, while metrorrhagia is a flow of blood irrespective of the monthly flux. Curetting acts by irritating the womb and compelling it to contract. It is not necessary for the success of the operation that there should be vegetations.

This girl has had a large number of remedies internally, but they have failed to arrest the bleeding I shall to-day examine her under ether, and I presume that the hymen will be ruptured.

If a young girl comes to you suffering from hemorrhage from the womb, you should not at first make a vaginal examination. First, give ergot in large doses; give a teaspoonful every two hours if necessary. The only objection to it is that it is apt to cause sickness of the stomach; but if there is no response it is not necessary to continue it for more than one day. If ergot fails, then give the oil of erigeron. Give it in capsules, or, if the patient cannot afford this, or if you live in the country and cannot procure the capsules, give from five to ten drops on sugar every two

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hours. If this does no good, try gallic acid. This is an excellent hæmostatic where the hemorrhage is due to a passive condition. If the girl is weak and pale from loss of blood, she requires some stimulant. Opium serves a good purpose in such cases. The girl is alarmed, her nerves are all unstrung, and she needs a stimulant. Under these circumstances I know of nothing better than opium. One or two words in reference to iron. If iron is given during the flow it tends to increase it, but when administered between the periods it sometimes does good and sometimes harm. If the patient improves under the iron it should be continued. After using these various remedies the bleeding continues, and you still do not wish to make the examination; what will you do next? You should then inject into the vagina water as hot as can be borne. If this fails, try the opposite,—apply ice to the abdomen; and at times I have checked the bleeding by introducing an icicle into the vagina. If all these methods fail, an examination is necessary.

In this case the hymen is not very distinct. There is simply a crescentic fold across the lower part of the vagina. I can with ease introduce two fingers. Of course, if she were not under the influence of ether I could not do this so readily. This is an interesting case from a medico-legal point of view. If this girl had sworn that a rape had been committed on her, I could not swear that such had been the case. A rape could indeed have been perpetrated without any marks of defloration.

The information that I shall gain from this examination may be wholly negative. The first thing that I note is that she has a natural anteflexion. I hope, gentlemen, that by this time you have learned that anteflexion is the natural condition of the womb, and to a greater extent than is laid down in the text-books. I can, with the utmost ease, feel the fundus through the bladder. The womb does not appear to be much enlarged. I pass the sound and obtain a measurement of three inches. This is too great, and would suggest something inside of the womb; but, on the other hand, there is no blood on the sound. If there were vegetations there would in all probability be some flow of blood. I try again, with the same result, but there is a muco-purulent discharge. I shall try to use the curette without introducing the speculum. I first catch the cervix with a tenaculum; and the instrument enters without any trouble. So far I am no wiser than when I began, and this constitutes the point of interest. I have to treat many of these cases somewhat empirically, but the empiricism is ballasted by a roundabout common sense. I have now gone over all of the endometrium, but have obtained nothing that looks like vegetations. I believe that the cause of the trouble is the angulation of the womb. When the womb becomes congested the angulation is increased and the veins cannot empty themselves, and there is thus produced stagnation. I shall now straighten the womb by the dilator.

While speaking of the remedies of service in checking hemorrhage, I neglected to speak of the insertion into the cavity of the womb of pencils of iodoform, or boracic acid. It is not often that you will be obliged to do this, and then usually it will be in married women.

Having dilated the cervix, I shall thoroughly apply to the cavity of the womb strong tincture of iodine. This is a saturated tincture. Some years ago I used to think that I could always stop hemorrhage from the womb. When a woman came to me stating that she was bleeding and that she had consulted a number of physicians without experiencing any benefit, I felt sure that I was going to cure her. For a number of years this was the case; but after a time I got hold of cases which were very obstinate: some, indeed, I did not succeed in wholly curing. I could always lessen the amount and check it for a time, but it would reappear. These were cases of fungous vegetations, which occur in the cavity of the womb in those who are sterile, in old maids, and in those who are trying to avoid conception. Nature intends that woman should conceive and that she should bear children. If anything interferes with this intention, as the fact that a woman is unmarried, or, if married, is sterile, or that the sterility is induced by preventive measures, we have the growth in the cavity of the womb of these vegetations and an excessive flow of blood. Nature has provided these monthly congestions of the womb; but she intends that the woman should marry and bear children and have these congestions stopped by pregnancy and lactation. If she be mar-

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ried and do not become pregnant, there are added to the monthly congestions those from coition; and if efforts to prevent conception are resorted to, still worse congestions follow.

One of the most common, indeed I might say the most common method of preventing conception is what is termed the method of withdrawal. I presume that it is used twenty times where any of the other methods are used once. In this the male organ is withdrawn at the moment of ejaculation. The result is that the orgasm is not reached by the wife, and but imperfectly by the husband. It does him harm. It is necessary that the male organ should remain in the vagina a short time, for a certain amount of friction is required to empty wholly the vasa efferentia of their semen. If the man withdraws, the semen collected in the vasa is not all ejaculated. Enough remains to tease the organs into the desire for another coition, which will occur very speedily, so that husbands in the habit of practising withdrawal are likely to injure themselves by too frequent intercourse, and wives often complain of such excesses.

The woman, however, suffers more than the man, for as soon as the male organ is withdrawn the orgasm ceases. The completion of the orgasm is necessary to cause relaxation and the discharge of the blood from the congested vessels of the womb and from the erectile tissues surrounding this organ and the vagina. When the orgasm is reached at the same period by the man and the woman, this congestion is relieved, and under such circumstances conception is most likely to take place.

I say to you, gentlemen, that it is my opinion, founded upon close observation, that the great majority of diseases of the womb which occur in married women result from means used to avoid conception. I care not what method is adopted; all are injurious. Withdrawal is hurtful, and so is every other preventive measure, for nature intends that woman should conceive. As I have said, I do not believe that there is one method of preventing conception that is not injurious to the woman and also to a certain extent to the man. A sterile marriage is usually poison to the woman, even if it be an innocent sterility,—*i.e.*, due to some natural cause, as marked angulation. If you look around among your circle of acquaintances you will see that the married women who do not bear children are ailing women. They have congestions of the ovaries or of the womb, or exhibit a marked hysterical condition due to passive congestion of the spine. There are but few exceptions to this rule.

To return to the causes of hemorrhage from the womb. The most common cause of bleeding from the womb in unmarried women past the age of twenty and in sterile women is fungous vegetations, produced by excessive nutrition of the endometrium. A single scraping will sometimes stop the bleeding in these cases, but in other cases the bleeding will return in two or three months and require a second application of the curette.

This scraping looks like rough treatment. It is very painful, and it is not a desirable operation to perform in one's office, for unless the patient has great confidence in you it is apt to drive her away. My advice to you is not to do it unless you have gained the confidence of the patient, or unless you can persuade her to take ether. You should always prepare her by telling her that you are going to give pain, but that you think she will be benefited by the operation. Let me again remind you not to forget the therapeutic dodge of using the curette during a menorrhagia. Nothing answers so well. A tampon may not check it, for the bleeding will sometimes recur as soon as it is removed; but in my hands the curette has never failed to stop a menorrhagia.

If in such a case you examine the womb and obtain as I did here a measurement of three inches, you can almost certainly exclude a polypus. If a polypus were present, we should expect the dimensions to be greater and also that there would be a little blood on the sound when withdrawn. The presence of a polypus of one-half inch in diameter would cause the womb to measure more than half an inch more than natural, for in its efforts to expel the polypus it would become hypertrophied. In older women there might be a little polypus in the cervical canal which would appear at the os. I looked for it in this girl, but did not find it, and I am pretty sure that if a polypus had been present it would have been removed by the curette. You may take this as the general rule,—that where the womb does not measure over three inches you will not be likely to find a polypus.

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Possibly this girl practises self-abuse. It is astonishing at how early an age children will acquire this vice, sometimes even before puberty. The vulva does not look as though such were the case. In the female self-pollution is usually practised by rubbing the clitoris. This causes an elongation of the nymphæ, especially of that portion which forms a hood over the clitoris, and the nymphæ, or labia minora, will hang down in loose folds from this hood. Such is not the case here.

As I have said, it is difficult to explain these cases. I must honestly tell you that after making the examination I leave this amphitheatre as ignorant of the cause of the bleeding as you who are sitting on the benches. I simply know that the womb measures three inches, that there exists an endometritis, and that the canal is patulous, for I could with ease introduce the sound without using the tenaculum.

Having curetted the womb and applied iodine, I shall put her on large doses of iron, in the form of Blaud's pill. They are made according to the following formula:

℞ Ferri sulphatis exsiccati,
Potassii carb. pur., āā 3ij;
Syrupi simp. vel glucose, q. s.

M. et fiat massa, in pilulæ no. xlviii dividenda.

Each pill contains two and a half grains of sulphate of iron and the same amount of carbonate of potassium. I shall order for the first three days one pill after each meal; on the fourth day, four pills,—two after breakfast, one after dinner, and one after supper; on the fifth day, five pills,—two after breakfast and dinner, and one after supper; on the sixth day, six pills,—two after each meal; keep her on six pills a day for one week, and then increase the dose by one pill a day until she takes nine pills each day, three after each meal.

If there be constipation, I shall order one teaspoonful at bedtime of the compound liquorice powder of the Prussian Pharmacopœia. This differs from the preparation with the same name in our own Pharmacopœia, by containing some aromatics, and also sulphur in addition to senna. It is, therefore, more palatable as well as more efficacious than the latter. In writing for compound liquorice powder, I always write underneath it "Pharmacopœiæ Germanicæ." In order to be more exact, I used to write "Pharmacopœiæ Borussicæ;" but druggists came to me so often to know what Borussica meant, that I substituted the word Germanica, which is more readily recognized.

HOSPITAL OF THE UNIVERSITY OF PENNSYLVANIA.

CLINICAL SERVICE OF D. HAYES AGNEW, M.D., PROFESSOR OF SURGERY.

TALIPES EQUINO-VARUS—TENOTOMY.

THIS child presents the deformity known as club-foot; it is congenital, and is of the particular form which is described as equino-varus. The extensor and peroneal muscles are paralyzed, and the foot is therefore given over to the power of their opponents. The heel is slightly raised by the calf muscles; the tibialis anticus draws the inner border of the foot upward, while the tibialis posticus and the flexor longus digitorum twist the anterior two-thirds of the foot inward. The child, therefore, if he were allowed to grow up in this condition, would have to walk upon the outer edge of the foot; indeed, some cases progress so far that patients have been found walking upon the dorsum of the foot and outer side of the ankle.

The relaxation of the paralyzed muscles produces distortion, the ligaments elongate, and we often find displacement of the bones, with decided changes in their articulating surfaces. The different parts act at a great disadvantage, and their functions are materially interfered with. As a consequence, periostitis or synovitis may ensue, associated with great pain.

Although mechanical treatment and the use of electricity in many instances may be sufficient, the treatment to be adopted in this case is to cut the tendons of those muscles which keep the foot in its unnatural position. This child also has phimosis; but, although that condition will account for a great many disturbances, I do not consider that in this case it has any significance.

I find that the tendo Achillis is flattened out like a ribbon. I make the parts tense, and draw the integument aside, so that the incision through the skin and that through the tendon shall not correspond, taking care to avoid the posterior tibial artery by passing the blade of the tenotome flatwise beneath the tendon throughout its entire breadth; then I turn its edge upward, when, with a slightly sawing motion, the tendon is completely severed.

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The knife is withdrawn in the same manner in which it entered, and I instantly cover the wound with my finger to prevent the access of air, and apply a small piece of adhesive plaster.

The foot must now be forcibly placed in a correct position, and often it is necessary to use a good deal of power. Unless you are dealing with a case of acquired deformity with anchylosis from a pre-existing disease of the joint, it is best to place the foot in a proper position *at once*. You notice that, in order to prevent excoriation, I place a strip of lint with some benzoated oxide of zinc ointment over the ankle and along the side of the foot. Then I apply a roller-bandage, which ought not to exceed two inches in breadth, so as to hold the foot firmly.

I now apply this modification of Scarpa's shoe, which is provided with two screws, so that, by means of a key, not only flexion and extension but also abduction and adduction can be made. The apparatus extends above the knee so as to obtain leverage: it must hold the heel down and carry the foot out. The child's heel must rest upon the heel of the shoe. I have put into it a little cotton to prevent undue pressure. Everything depends upon getting the foot into a proper position, otherwise you will fail to effect a cure.

To-morrow morning the shoe and the bandage will be removed and the limb will be vigorously rubbed with alcohol. The dressings and the shoe will be re-applied, and this process of rubbing and motion will be carried out persistently. Faradization will often aid in the restoration of muscular power. Always use mild currents, and never for a longer time than four or five minutes every day. The patient will have to wear this shoe for one, two, or, possibly, three years; until the peroneal muscles have acquired the power of contractility it will not be safe for him to lay it aside.

ARTHRITIS OF THE ANKLE.

This boy has been brought to us with disease of the ankle-joint. When I first attempted to examine him a few moments ago, the resistance was so great that I could not form a satisfactory judgment, so I have had him etherized.

In comparing the two ankles, notice first the normal one, its prominent malleoli and the concavities below and behind. You observe that the diseased ankle is larger; the depressions on each side of the tendo Achillis and behind the malleoli have been obliterated, owing to the softening of the texture of the ligaments and from an effusion into the extra-articular fibrous tissue. The leg itself is wasted and the foot is held in extension. In arthritis of any joint, the affected member always assumes that position which will insure the most complete relaxation of the joint-tissues. The muscles are rigid, and are constantly on guard to hold the joint-surfaces in the relation most favorable for comfort. Any interference with this position, whether by relaxation of the muscles during sleep or by forcible flexion or extension, makes the patient cry out with pain. The sudden starts that are so often seen in this disease are the result of involuntary contraction of the muscles as pain summons them at once to their duty. A good example of this involuntary muscular tension, and one of great diagnostic value, is seen in hip-joint disease.

Now that the muscles are perfectly relaxed by the anæsthetic, I can move the joint freely, but not without distinct grating of the opposing surfaces.

What shall we do for him? We must put the joint at perfect rest, and must remove all undue pressure upon the articulation. How shall we do this? First we place the foot at a right angle with the leg, and then apply a nicely-fitting flannel roller bandage as far as the knee. Having thus protected the skin, we apply a plaster-of-Paris bandage until the foot is firmly encased from the toes almost to the knee. The sound foot will be supplied with a high-soled shoe, and when the plaster is hard we will allow the patient to go about on crutches; were he younger he would have to remain in bed and from time to time be carried about in the open air. As the swelling recedes it will be necessary to renew the splint or to pad and re-apply the old one, in order that the joint may be preserved immobile.

When abscesses complicate the case, you may cut openings in the splint through which the discharges may escape and through which the proper dressings may be applied. This dressing must be persisted in for several months, and great caution will be required in resuming the use of the limb.

Kneading and rubbing the muscles, the cold or warm douche, and gentle and cau-

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tious passive motion must be instituted at the proper time.

Constitutional treatment must not be neglected. In pale, delicate subjects give iron, changing its form from time to time. Cod-liver oil in small doses, and, when the appetite flags, quinine or tincture of cinchona, will be found valuable. Milk and eggs, animal broths and meats, should be freely given, and wine or some preparation of malt may be allowed. Such a treatment, conjoined with fresh air and sunshine, will doubtless in this case be rewarded by success.

When, however, an ankle-joint becomes disorganized by suppuration and caries, do not defer an operation too long. When the disease has progressed from the joint to the tarsus, you may be mortified to find that amputation is demanded, where, a few weeks before, an excision of the joint might have sufficed.

HYDRORACHIS.

This infant, three weeks old, has a swelling in the posterior portion of the lumbar spine, which was there at birth. It is due to a deficiency in the posterior arches of the spinal column permitting a protrusion of the membranes of the cord and spinal fluid. This condition is sometimes called *spina bifida*, but, as this term relates only to the deficiency of the arch, I prefer to use the other name.

The skin covering this tumor is reddened, attenuated, and fluctuation is readily obtained. Whenever the child cries the tension is slightly increased. Closely attached to the sac of the tumor is the spinal cord; the fluid has pushed it back. The fluid is cerebro-spinal or subarachnoid.

As a rule, these cases are not capable of being treated by any surgical measure. Occasionally we find the enlargement pedunculated, owing to the small size of the aperture through which the tumor emerged. Sometimes, also, the skin is of the natural color. These conditions constitute the most favorable cases for treatment.

When, however, the fluid presses the cord or its nerves, paralysis of the bladder, rectum, or lower extremities, or even convulsions, may be produced.

In favorable cases the arches may close spontaneously and a cure follow. Such a result occurred in a child that was under our observation in this clinic for a period of two years. The tumor diminished gradually and its neck contracted until it was reduced to the size of a small probe; nothing was left but a little mass of what appeared to be the redundant integument of an extinct sac. The mother was anxious for its removal, and, as the boy had grown strong and the case seemed to have been perfectly well for over a year, I consented to clip off this thread-like pedicle. Not long after this a serous fluid began to dribble from a hair-like opening. However, by passing a pin through its sides and by bringing the parts together with a figure-of-eight suture, the opening was successfully closed, and the child made a permanent recovery.

So long as the natural process of pedunculation is progressing, it is best to keep a close watch, but to abstain from any operative interference. It is only when the tumor enlarges and threatening symptoms arise that you are to resort to any operation.

One method of procedure is to apply to the pedicle an elastic cord so as to favor the isolation of the sac. Another plan is to use injections for its obliteration, just as we do in cases of hydrocele. For this purpose we have used successfully, in the case of another child, a solution consisting of fifteen grains of iodide of potassium and one grain of iodine to the ounce of distilled water.

Injections should, in my opinion, be confined to cases where pedunculation exists. In their employment the neck of the sac should be compressed, to prevent the iodine from entering the spinal canal. A delicate trocar is then introduced within the sac, and its contents entirely removed and preserved at the temperature of the body. After injecting the sac and allowing the fluid to run out, the cerebro-spinal fluid first removed may be restored. The canula is then withdrawn, and the puncture in the skin covered with a strip of adhesive plaster. If the result be favorable, the inflammation will have closed the communication between the cavity of the sac and that of the spine, and thus effect a cure.

Such treatment, unfortunately, is not applicable in the case of the child before you. We can only advise the mother to keep it carefully shielded from harm and not to allow anything to rub or irritate the back. The treatment—for the present, at least—must be palliative.

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TRANSLATIONS.

THERAPEUTIC ACTION OF QUEBRACHO.—Together with the report of forty-two cases of dyspnœa in which the drug was used, Dr. J. M. Mariani y Larrion, of the Princess Hospital, Madrid, contributes some observations upon the physiological and therapeutical actions of quebracho, in a monograph recently published. His conclusions are as follows:

"1. The white quebracho is a medicament the principal effects of which consist in a diminution both of the number of respiratory movements and of the cardiac contractions.

"2. Its action appears to be directed principally upon the circulatory centre, strengthening and regulating the heart's contractions, whether in a direct manner or through the medium of the nervous system.

"3. From the reported cases it is proved that this action is both decided and prompt, as its effects were witnessed immediately after the administration of the remedy.

"4. It may be considered as the only remedy with a manifest 'anti-dyspnœic' action, since it combats this symptom directly by its proper effects, and without assistance from other agents.

"5. In order to judge of its mode of action in cases of purely nervous dyspnœa, an extended series would be necessary.

"6. It is possible that it may exhibit its proper effects in dyspnœa arising from acute affections of the thoracic organs.

"7. We have not had experience of its action in dyspnœa caused by abdominal disorders, but we believe, in view of their mechanism, that its effects will be equally certain.

"8. Its administration in the indicated doses is not dangerous, and its continued use does not produce any alteration of other organs or apparatus."

He gave the remedy in cases of chronic laryngitis, pulmonary tuberculosis, chronic pneumonia, bronchitis chronic with or without emphysema, hemorrhagic infarct of lung, cardiac dyspnœa, nervous dyspnœa, and acute thoracic disorders. The results were generally satisfactory, but principally so in cases with thoracic lesions, and particularly disorder of the circulatory apparatus. The formula preferred by the author is as follows:

℞ Ext. quebracho alc.
(or hydro-alcoholic tincture), 2 to 4 gr.
Aquæ, 150 "
Syrupis, 30 "
M. S. One-fourth to be taken at a dose, to be repeated every two hours.

A syrup of quebracho was also employed in doses of two spoonfuls every second hour; and the extract or tincture was used, given in doses of from .50 to 4. grammes. —*Bull. Gén. de Thérapeutique*, July 15.

VERTIGINOUS SENSATIONS ACCOMPANYING TABES DORSALIS.—From a study of twenty-four cases of so-called tabetic Ménière's disease (in which these symptoms were present in seventeen cases) Drs. Marie and Walton found that the beginning of the vertigo was, as a rule, coincident with the occurrence of the ataxic symptoms. When the hearing was tested with the watch it was found in the majority of cases that there was a considerable diminution in the acuteness of hearing, whilst the tuning-fork applied to the bones of the head showed it to be normal; but local circumstances, such as the presence of small collections of cerumen, a myringitis, an otitis media, or even an occlusion of the Eustachian tube, were always found to account for this apparent contradiction. Other reporters had not found any of these lesions in their tabetics affected with vertigo in which acute hearing was preserved, whilst out of the entire number seven cases presenting them were accompanied by deafness. The authors conclude that the vertiginous symptoms of tabes dorsalis are not attributable to degeneration of the auditory nerve, but to lesions existing in the cerebellar or bulbar origin of the nerve and of the special fibres of the eighth pair which supply the semicircular canals and preside over the sense of space. These views coincide with those recently expressed by Erlitzky.—*Archives de Neurologie*, July.

TETANUS SUCCESSFULLY TREATED WITH CURARE AND CHLORAL.—A three-year-old child having been injured by a horse-car received a severe crush of the calf of the leg (reported by Dr. Hjorst, *Norsk Magaz. fur Laegevidensk*, B. xii. Hft. 8). Under antiseptic treatment of the wound the patient did well until the thirteenth day, when symptoms of tetanus developed. Morphia and chloral gave some relief by the rectum, but the disease became more

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marked. On the twenty-fifth day the child's condition seemed hopeless, and after consultation it was decided to give hypodermically an injection of curare .001 grm. (gr. $\frac{1}{64}$), which was repeated at the end of three hours increased to .002 grm. (gr. $\frac{1}{32}$), which gave decided relief. The next morning an injection of .0015 grm. ($\frac{1}{48}$ gr.) was given; the patient was decidedly more comfortable; chloral was again given by the rectum at night. The next day patient was much better and had spontaneous diuresis and evacuation from the bowels. Convalescence gradually was established. The reporter observes that the success of the treatment may not be entirely attributable to the curare, however.—*Centralblatt für Chirurgie*, No. 22.

NERVE-STRETCHING FOR TIC-DOULOUREUX—A MODIFICATION OF THE OPERATION.—In a discussion upon the subject, brought up by a paper of M. Longet before the Société de Chirurgie, Paris, several cases of nerve-stretching for spasmodic neuralgia of the inferior maxillary nerve were referred to: in each case, although immediate relief was experienced with loss of sensation of the corresponding area of the lip and gum, the disorder usually returned at a period of about six weeks. M. Polaillon recommended, in preference to simple elongation of the nerve, nerve-stretching, with section, and tearing out the peripheral extremity. In one case of an aged man, the result of this operation was very satisfactory, and permanent relief was obtained.—*La France Médicale*, No. 11.

GLYCERIN AS AN EXCIPIENT.—The use of glycerin as a solvent in pharmacy, in the place of lard or oil, is opposed by Vigier, who calls attention to the fact that glycerin does not penetrate the skin, and is therefore a poor excipient for drugs that are to be absorbed. For the same reason, it is especially applicable where the systemic effect is undesirable, as in the use of mercuric chloride as a parasiticide, the glycerin combination being preferable to the ordinary officinal ointment, some of which is necessarily absorbed. True fatty substances are therefore required as vehicles for remedies that are to be used by inunction, while glycerin ointments may be employed where a local effect only is sought after.—*Rundschau für Pharmacie*, vol. ix. 224.

SALICYLIC OINTMENT FOR ECZEMA.—In the eczema of the scalp in children, Dr. Lassar (*Monatshefte für praktische Dermatologie*, 1883, No. 4) recommends, after cleaning the surface,—

℞ Acid. salicylic., 1 g.;
Tinct. benzoini, 2 g.;
Ung. petrolei, 50 g. M.;

to be employed two or three times a day.

In eczema of the non-hairy portions he employs

℞ Acid. salicylic., 2 g.;
Ung. petrolei, 50 g.;
Zinci oxidi,
Amyli, āā 25 g. M.

This paste is absolutely unirritating, and, besides, has the advantage that it does not retain the exudation upon the skin, but allows it to escape through it.—*Centralblatt für Chirurgie*, No. 28.

DEVELOPMENT OF A FATTY TUMOR AFTER INJURY.—A case, interesting from an insight which it gives into the pathogenesis of morbid growths, is reported by Th. Kölliker in the *Centralblatt für Chirurgie*, No. 11. A hæmatoma of the shoulder following a fall was followed by the development in the same place of a lipoma, which nearly four months after the injury had attained a considerable size (two and a half centimetres high and six and a half centimetres thick), when it was removed by the reporter.—*Centralblatt für Med. Wissen.*, No. 28.

TREATMENT OF WARTS.—A plaster of black soap, applied each night for a fortnight, according to M. Vidal, will soften a wart so that it may be scraped off. The treatment by M. Cellier is to transfix the principal wart with the point of a pin, the head of which is then to be held in the flame of a candle until the wart is destroyed: it will drop off in a few days. The remaining warts will then usually disappear.—*La France Médicale*, No. 68.

THE CATARRHAL ULCER.—Virchow, in a communication to the *Berliner Klinische Wochenschrift* (1883, No. 8), condemns the term "catarrhal ulcer" as a misnomer, since there is no positive catarrhal ulcer distinguishable as such from all other ulcers, and because the ulcers occurring during a catarrh of the mucous membrane are also found in the course of other affections which have nothing to do with catarrh.

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PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, SEPTEMBER 8, 1883.

EDITORIAL.

THE CAUSE OF ABSCESSES AFTER HYPODERMIC INJECTIONS.

THE causes of abscesses following hypodermic injections may be broadly divided into those pertaining to the individual subject, and those for which some other explanation must be sought. In the first class, no criticism can be made upon the hypodermic puncture, or upon the means by which it has been performed: these being unexceptionable, the occurrence of an abscess is an accident that must, in such cases, be attributed to the individual himself. Every practitioner has met with certain individuals in whom, at times, whether from a low grade of vitality of the tissues, or from an excess of leucocytes in the blood, every slight scratch or injury is followed by suppuration. It is not surprising, therefore, if under such circumstances the use of a hypodermic needle is almost certain to cause abscess. However, such cases being comparatively rare, this cause of abscess following the hypodermic puncture is the exception to the rule: the common explanation of the suppuration will be found in the instrument, in the solution, or in the manner of performing the operation.

With regard to the needle of the syringe, it should be of as small a calibre as can be conveniently used, it should be sharp, and it should be kept scrupulously clean. It is not enough that the instrument be apparently clean: in view of the inoculation-experiments of Koch, Pasteur, and many others, it is evident that, unless the little instrument is rendered *aseptic* before its use, scarcely any reason could be given that would warrant incurring the risk of its employment. The physician who carelessly uses a hypodermic syringe without previously rendering it chemically clean is deserving of as much censure as the surgeon who disregards this precaution in preparing his instruments for an operation. With the recent advances in the pathology of the infectious diseases in mind, what hospital physician would be willing to take in his own person an injection from the ordinary ward hypodermic syringe, with no more precautions than are commonly observed by the nurse in administering it to patients? The instrument, therefore, should be scrupulously cleansed with some antiseptic agent before and after every hypodermic injection, and in the interval should be kept dry and free from rust. Gold or platinum needles are usually regarded as preferable to steel, on account of their freedom from oxidation and their immunity from the chemical action of the remedies employed.

With regard to the influence of the solution administered by subcutaneous injection, it is believed that this is the most frequent cause of superficial abscess at the point of puncture. A microscopical examination of the solution, the employment of which has been followed by such an abscess, will generally show the presence of active living micro-organisms, which are sufficient to explain this result. Without speaking of the employment of remedies which are in themselves irritating, and, therefore, unsuited for this form of administration, but confining our consideration to the ordinary solutions, it has been found that the common cause of abscess after hypodermic injections of morphia has been the employment of impure water in making the original solution. In a paper recently read before the Indiana State Medical Society, Dr. Yeakle states that many pharmacists, in a case of emergency, would not hesitate to use rain-water, water from melted ice, or distilled water that has been exposed to the deleterious influences

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of the atmosphere, in dispensing a solution for hypodermic and other uses, and he relates several instances in which the repeated occurrence of abscess after injections led to the microscopic examination of the solution and the detection of the micro-organisms in active motion. He recommends the use of pure carbolated distilled water (1 to 1000), the flasks in which it is dispensed having been rendered chemically clean by permanganate of potassium solution (two per cent.), and heat. When a solution with morphia is thus made, it may be kept in a well-stoppered bottle for months without the slightest indication of decomposition or organic contamination.* Those who are in the habit of using the recently-introduced hypodermic pellets should carry such a fluid with them, in order to have perfectly germ-free solutions.

The manner of performing the operation of hypodermic puncture for the subcutaneous administration of remedies is carefully prescribed in all the systematic treatises upon this subject, and in such detail as to invest this part of the operation with unnecessary and undeserved importance. If, after a fold of the skin is lifted up, the point of the needle be inserted until it is found to move freely in the areolar tissue, the injection, as the rule, may be made without fear of abscess *if the solution and instrument are each aseptic*, which is, after all, the point of greatest importance in hypodermic medication.

THE PROGRESS OF CREMATION.

WE noticed some time ago a change of popular sentiment with regard to cremation as a means of disposal of the dead: no longer regarded as sacrilegious or immoral, the mere mention being shocking to ears polite, it has now advanced to general consideration, and is nearing the stage of experiment and temperate discussion. We learn from the daily press that a crematory has been established in Rome as a substitute for the horrible fosse, and that it is working satisfactorily. Application has been recently made in Paris, and the preliminary steps have been taken, for the erection of a cremation-furnace for the destruction of bodies dead of contagious disease. A public crematory has also been proposed in New York City, and will probably soon be erected. The furnace of Dr. Le Moyne, at Washington, in this State, established a few years ago, has so many applications from all parts of the country that the demand for its service is rapidly growing beyond its power to fill. Two new crematories have been begun in this city, one at the University of Pennsylvania, and the other at the Municipal Hospital: they were devised for the purpose of disposing of the refuse material of the dissecting-room and the destruction of hospital fomites, respectively. We believe it would be practical wisdom to make them sufficiently large and convenient to answer the purposes for which a demand already exists, and which must increase with the advance of civilization.

* The Druggist's Circular and Chemical Gazette, August, 1883.

CORRESPONDENCE.

LONDON LETTER.

THE fifty-first meeting of the British Medical Association has just been held at Liverpool, under the presidency of Dr. Waters, the well-known physician of that town, and the author of a treatise on "Diseases of the Chest." Twenty-four years ago the annual meeting had been held in this place, and in this period the membership of the Association has risen from twenty-three hundred to ten thousand. It was expected that there would be a considerable amount of interest attaching to this meeting, especially as regards the executive of the Association. Heart-burnings, culminating in periodical outbreaks of rebellion against the powers that be, have existed, to my personal knowledge, for fourteen years, and how long before I am not in a position to say. Put briefly, the position was this. The Association is ruled by a Commit-

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tee of Council; the Council is chosen by the members, while in turn it elects so many representatives as its Committee. There are then so many elected members of the Committee, while the rest consists of ex-Presidents. These last are the men who are Presidents when and where the annual meetings are held, and who may or may not have been long connected with the Association. For instance, last year the annual meeting was held in Worcester,—the birthplace of the Association,—where, strange to say, there existed no branch until a very few years ago, when one was instituted in order to receive the Association in the city of its birth. Dr. Strange thus becomes, as an ex-President, a member of the Committee of Council. These ex-officio members of the Committee have hitherto ruled the roost, and have kept the elected members in check. The editor, very naturally, found it to his interest to keep friendly with this clique. Every suggestion for reform was sturdily resisted by these ex-officio members of the Committee, who came to be rather disrespectfully spoken of as "barnacles," from their tenacious adherence to their position. Most of the grievances of the Association arose from the unhallowed alliance of these men with the editor, and vainly the Association has hitherto striven to get this clique out of the saddle. Any man who had anything to say obnoxious to their self-pride was silenced, not always in a very courteous or dignified manner. The nuisance, in fact, had become intolerable; my own motion last year to limit the editor's tenure of office was got rid of by a device worthy of these "barnacles." However, it stood over till the next meeting, to be tried again. In the mean time, a special meeting was held at Birmingham in May last, at which a profound modification of the executive was proposed,—viz., that "representative members should be chosen by the different branches in the proportion of one to every two hundred members, to represent associates in the Committee of Council, and that the travelling expenses of these elected members should be paid." By this means the management of the affairs of the Association, it is held, will be brought under the supervision of the members. At the branch meetings, each representative will tell his branch what was done, and, in brief, give an account of his stewardship. This change will reduce the "barnacles" to a helpless minority, and permit the Association to rule itself instead of being ruled, or, perhaps, being overruled. The proposed new by-laws provide that "the Editor and Secretary shall hold their respective offices during the pleasure of the Council, subject to receiving or giving (as the case may be) three months' notice to determine their respective appointments." Hitherto the editor only had an arrangement with the Committee of Council, involving three months' notice, and the consent of the Association at large would have been required to get rid of him, if desired. These combined changes seemed to me sufficient to meet the requirements of the case, so my motion was withdrawn, and I was more a spectator of, than a participator in, what went on. A business meeting was held at 3 P.M. on the Tuesday afternoon to pass these proposed by-laws. This is what the Association's journal says about the proceedings: "As might have been anticipated, they were not altogether of an unanimous character; and it must also be said, with regret, that during part of the proceedings at least there was a considerable amount of disorder. The meeting, however, addressed itself from the first to the consideration of the very complicated questions put before them, with an evident determination to get on with the business and to deal with it in a broad, liberal, and candid spirit. Unfortunately, not all the speakers appeared to possess as much deference for the wishes of the meeting and for the authority of the President as enthusiasm for the particular opinions which they desired to advocate." In other words, the Committee of Council came without having made up their minds as to what they would do,—whether they would put the proposed by-laws *en bloc* or take them *seriatim*. The members had assembled in a determined mood to break once for all the tyranny of their rulers and to insist upon being heard, and not be put down by blatant shouts and assertiveness, and so they took the only practicable method of carrying this out. The amendments and remarks were lost in clamor and counter-remarks on the part of members of the Committee of Council. The scene was that of a bear-garden; the local press had to express its doubts as to whether the term "gentleman" was inseparably linked with the medical profession; a Houndsditch vestry-meeting would probably have contrasted favorably with this annual meeting of the British Medical Association. Shouts of "Chair!" were constantly heard, numerous speakers were clamoring to be heard, while others were clamoring so that they should not be heard: the President was simply powerless to control the meeting. The sonorous tones of Dr. Husband seemed to irritate a tall Irish member, who again and again rose, and addressed him in the broadest accent, thus: "Sit down, sir! Sit down!" to the great amusement of the meeting, and finally towered up asking for some one to "report progress;" a request met by screams of laughter. However disorderly the proceedings, the "barnacles" realized that their reign was ended: the day when they could get up and waste the time of the Association by self-laudation, until they were spoken of as "a mutual-admiration society," has passed away,—it is to be hoped never to return; they realize that the members will not tolerate them any longer,—that they have their

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wishes, to which their leaders must attend. It was a rough way of putting things right, but it was effective. The opinion of all is that a good work has been done, and the Association will now enter upon a new sphere of extended usefulness. Those admirers of our Association (as it was) upon your side of the water may take the lesson to heart and profit by it. "The Augean stable is swept at last," was the remark of one of the reformers within the presiding oligarchy. Now it will be possible to turn to the other matters. Perhaps I should not have penned the above account of the proceedings. But it has come to my ears that my statements as to the condition of the Association have been challenged by some *anonymous* correspondents to your journals, who, I suppose, know the facts infinitely better than I do, who mix among the actors. With the overthrowal of the "barnacles" the editor can say "Ca, Ca, Caliban! get a new master, be a new man;" and I doubt not he will be. The President's address dealt with the progress of medicine during the existence of the Association, which it pronounced to be gratifying; with the prospect of better things, even, to come. The higher education of medical men was held to be eminently desirable, and a step in the right direction; the advance in the use of instruments of precision in clinical medicine was hailed with satisfaction; tapping of the chest was a step forward of great importance; our position in regard to specific fevers was held to be a great improvement on the past; the practical utility of the "Collective Investigation Committee of the Association" was enlarged upon; by its means the great body of the members could bring their experience to bear upon medicine, as contrasted with "hospital work," and a very useful increment to our knowledge it promises to give us. After this he went into "micro-organisms" like an express-train sailing out on the main line; but, as you have thoroughly discussed the subject in your own columns, it is not necessary for me to attempt to give you an abstract of what Dr. Waters said upon this subject, beyond that it was sound and sensible. The address on Surgery was given by Mr. Reginald Harrison, a surgeon of repute. He referred to excision of the knee-joint, by Surgeon Park, in the last century, then to nephrectomy and ovariotomy in the present, and then to operations on the urethra. But it cannot be said that there was much that was original in his discourse. The address in Pathology was delivered by that rising pathologist, Charles Creighton, so well known in connection with his investigations on the subject of mammary cancer. The secretion of the mammary gland normally finds its way outward as milk; but under certain circumstances the cells stagnate and accumulate within the gland, so that there is first a mere disturbance of the physiological processes of the gland before cancer is established. As to the formation of tubercle-nodules in tuberculosis, he holds that these occur where fat-masses are found upon serous membranes. Under certain circumstances these "fat-masses" disappear, and then embryonic tissue is produced instead. This is a most valuable observation, as it throws a distinct light upon the well-known clinical fact of the value of fat in the prevention and treatment of consumption. Possibly it is in these neoplasms that the bacillus of tubercle finds a suitable habitat; only Dr. Creighton did not allude to bacilli. He said, in speaking of yellow fever, "It passes by the negro as if it recognized the ties of blood; and I want no other fact than that to prove that even this infection, belonging to the exogenous group, has sprung remotely from physiological disorders of the body, and that it carries with it the distinctive marks of its native soil." The address in the Obstetric Section was delivered by Dr. Grailly Hewitt, who took up the question of food in obstetric and gynæcological practice. In a great many instances which had come under his notice, the morbid condition seemed to have developed in a state of general weakness due to defective nutrition, amounting, practically, to chronic starvation. He gave instances where the dietary had been deficient in albuminous elements, and from this cause the tissues were ill nourished. "A continuously bad appetite constitutes a grave condition, and should be seriously regarded," was his conclusion. In the Physiological Section, Prof. E. H. Schafer, of University College, chose the subject of "The Structure of the Animal Cell" for his topic. It was a very learned address, interesting to physiologists, but scarcely of general interest. In the Sections themselves there was much said that was of moment. In Medicine, Prof. W. T. Gairdner opened up the discussion on "Aphasia," in a paper at once interesting, instructive, and amusing, in which he discussed the forensic aspect of the subject. He was followed by Dr. Hughlings Jackson, who directed his remarks mainly to the subject of "Dissolution" as affecting aphasia; the higher and most specialized attainments of Broca's convolution are dissolved, and the lower centres remain. Dr. Broadbent gave some account of cases illustrating the various forms of aphasia, while Dr. Clifford Allbutt followed with the physiological explanation of the morbid phenomena of the subject. Excessive volubility of speech was due to the loss of control in the higher inhibitory centres, while Dr. James Ross held loss of conducting power to account for some cases: other speakers followed. Next day, Dr. Broadbent opened up the wide, complex, and clinically immensely important subject of "The Causes and Consequences of High Arterial Tension," in a lengthy speech, itself too concentrated for any abstract, but one which will be carefully read and re-read by all interested in

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the topic, when in print. The writer followed, confining himself to the relations of this condition to cardiac valvulitis, and pointed out the changes which precede as well as those which follow the valvular mischief, where this condition is established. Dr. Eddison, of Leeds, Dr. Mahomed, and others followed, dealing with the different departments of the extensive subject. In the Surgical Section, the subject of "Operative Proceedings in Cases of Intestinal Obstruction" was thoroughly threshed out. Mr. John H. Morgan led off with an advocacy of median incision in cases of doubtful diagnosis, then with the consideration of the treatment of gangrenous states of the gut. Mr. Pierce Gould insisted upon the consideration of the causes of the obstruction in relation to its treatment; Mr. Lawson Tait said he had a considerable experience of operating in intestinal obstruction, and had never regretted so doing, but often regretted not having operated in many cases. Then Littré's operation was discussed. In Pathology, Dr. T. Henry Green presided, and spoke of pulmonary phthisis as an inflammatory consolidation exercising an injurious effect upon the surrounding tissues. The infectiveness of phthisis depends upon changes in the inflammatory products, "for the occurrence of which the presence of organisms is a necessary condition." He held the observations of Klebs and Koch to be very valuable. After this the discussion of micro-organisms went on under a full head of steam, greatly aided by beautiful diagrams. A Section was devoted to the diseases of children, presided over by Dr. S. Gee, in which D. T. Barlow spoke of "rheumatism and its allies," Dr. Ashby reviewed a number of cases of scarlatinal synovitis, and Dr. Stephen Mackenzie spoke in the discussion. In the Ophthalmological Section, the subject of acuteness of vision and color-blindness among sailors was the leading topic; and systematic examination as to the latter for naval men was advocated. In the Psychological Section, Dr. Lawes Rogers compared general hospitals with hospitals for the insane, in which he treated the subject exhaustively.

In the new Section, lately instituted, of Otology, Mr. George P. Field presided. He reviewed the progress of his department during the past year, and showed how gratifying was the present treatment of deaf-mutism; after that he proceeded to point out the importance, from an assurance point of view, of chronic discharges from the ear; cerebral abscess, acute meningitis, and pyæmia were untoward consequences, which all met with several times every year. He thought this would be an excellent subject for the attention of the Collective Investigation Committee, as the large number of the associates would furnish an ample return. Then, again, he told how many persons with injured membranæ tympani were allowed to go on unrelieved, because their medical advisers were not sufficiently familiar with the utility of an artificial drum-head. On the Thursday, in the Obstetric Section, papers were read by Dr. Wallace, of Liverpool, and Dr. Schröder, of Berlin, on the subject of the "Total or Partial Extirpation of the Uterus for Malignant Disease," an operation no longer so dreaded as it was of yore. In the Surgical Section, Mr. Christopher Heath, the great London surgeon, brought forward the subject of the "Immediate Treatment of Fractures by Plaster-of-Paris Bandages." He advocated the placing of the limb in wadding, so as to prevent effusion, or separation, of fragments, and then the encircling of the whole in these bandages. If there were effusion, it was well to aspirate the joint. In fracture of the femur, he did not approve of fixing the adjacent joints: he found this plan very satisfactory in fractures of the clavicle. Then the subject of excision of joints came under discussion. Mr. Coats spoke in favor of early excision in morbus coxarius, as giving much better results than could be attained after extensive injury had been wrought; then Mr. R. Crosse continued the subject of the "Treatment of Arthritis by Incision," in which he stated that he found the results to be unsatisfactory. Dr. Byrom Bramwell, of Edinburgh, gave a very interesting account of the nature of Cheyne-Stokes respiration, illustrating the subject by diagrams showing the condition of the respiratory centre at the different portions of the act, and the respective relations of the inhibitory and discharging areas. On the Friday, the Public Medicine Section was engaged in the consideration of the disposal of sewage in towns, when Dr. Goldie, of Leeds, and Dr. Whittle, of Liverpool, read papers on the subject, the discussion which followed being so well maintained that the matter of "cremation" could not be considered. In the afternoon the final general meeting was held, in which the usual votes of thanks to everybody were formally put and carried. Beyond this the meeting was employed in the very laudable action of defending the Contagious Diseases Act (human), condemned recently by Parliament. The good done by this enactment in towns to which it applied has been recognized by the profession, as well as by all others brought into familiarity with its working. Already, since it has been suspended, the increase of venereal disease in garrison towns has been simply appalling. The Association took the opportunity of expressing its opinion; but, however explicit that expression, there is little prospect of its carrying any weight with it, in the face of the obstreperous Radicals to whom and to whose attitude towards the medical profession allusion has been made in a previous letter. Another matter was decided at that meeting, which marks a new departure in the history of the Association: for years it struggled on in great finan-

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cial difficulties, but the appointment of a secretary who must devote his whole time to his work, instead of the old proceeding of intrusting the office to a member of the Association who was also engaged in private practice, has been followed by the most gratifying consequences. The British Medical Association is now rich, and possessed of a surplus income of several thousands a year. For some time past, sums have been voted for the prosecution of research in many subjects, and now the subject of endowing two scholarships, of the annual value of one hundred and fifty pounds and tenable for three years, has been seriously discussed and recommended to the Association, and will soon be in work. This will be doing a good deed in a country where research is too commonly left to find its own funds. Probably the matter will be further discussed and put on its way at the forthcoming meeting in Exeter Hall, on the 17th, for the final consideration of the proposed new by-laws. On the whole, the meeting was a highly successful one, though it did not see many outsiders, either from the continent or Americans; indeed, there was a very small attendance of metropolitan members, for some reason or other. But a great deal of good sound work was done in the Sections, where men interchanged opinions to their mutual benefit. As to the social aspect of the meeting, Liverpool kept up its name for hospitality. The *soirée* on the Wednesday evening was highly successful, even though the rooms were a little overcrowded by the natives, as is usual upon these occasions. There was the customary Friday evening entertainment by the municipal authorities, and, if there was no garden-party, as is now the custom on the Friday afternoon, there were excursions to see the grand New York liners, of which the "City of Rome" is the hugest. These outings on the river rather thinned the attendance on the Sections, though these were by no means deserted. On the whole, the meeting was a great success, and will be historical as regards the Association, from the internal reforms there carried, and the extended usefulness of the British Medical Association involved therein.

J. MILNER FOTHERGILL.

PROCEEDINGS OF SOCIETIES.

AMERICAN DERMATOLOGICAL ASSOCIATION.

THE seventh annual meeting of the American Dermatological Association was held at the Sagamore Hotel, Green Island, Lake George, on August 29, 30, and 31. The attendance was larger than at any previous meeting of the Association, and the number of papers read was greater, although there were not so many of conspicuous excellence as have been presented at some of the former meetings.

The proceedings were opened by a few words of welcome from the President, Dr. R. W. Taylor, of New York, who expressed his pleasure at meeting so many old members, and presented a friendly greeting to the new members present. The formal proceedings were then opened by Dr. Piffard, of New York, who read a paper upon the "Treatment of Acne," in which he said that the frequent relapses constituted a marked feature in the disease. In treatment, etiology was the chief matter to be looked after. The chief physical factors of the affection are well known. In some cases these cannot be removed. For instance, if the acne be due to an incurable interior trouble, it cannot be remedied: treatment is useless. In ordinary acne the writer would recommend the internal administration of calx sulphurata (sulphide of calcium) in minute doses. Another excellent remedy is bromide of arsenic in the dose of $\frac{1}{100}$ to $\frac{1}{50}$ grain in alcohol. If a one-per-cent. solution were made, the dose would be one to two minims in a wineglassful of water. If the stomach become upset, the treatment must be suspended. The former remedy (calx) should be employed in lymphatic cases, the latter in the more acute cases.

Locally, early puncture of the pustules and warm (not hot) water applications are to be used in some cases, while in others hot water applications would be best. In addition, belladonna liniment made up into ointment, and applied in the evening, is sometimes of use, or an ointment made of the fluid extract of stramonium prepared from fall leaves freshly gathered.

In chronic acne, the calx sulphurata should be employed in larger doses, pushed until the physiological effect is produced, say one-fiftieth-grain dose to begin with, rapidly rising. Bichloride of mercury is sometimes of use internally administered. Ergot has recently been recommended by Denslow, of New York; and although the writer was not prepared to commit himself to Denslow's theory of the action of the drug, he thought it of practical value in some cases.

In the discussion which followed the reading of this paper, the general voice was against the sulphide of calcium, which had proved inert in all the speakers' hands. Ergot was generally allowed a certain value, especially in reducing redness of the skin.

Dr. Graham, of Toronto, followed with a paper on "General Exfoliative Dermatitis," which he regarded as a commoner affection than the study of current medical literature would indicate. The writer gave notes of four cases coming under his observation, and concluded by proposing that two varieties of the affection under consideration should be admitted: 1, dermatitis exfoliativa rubra; 2, dermatitis bullosa et exfoliativa. The first

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term might include pityriasis rubra, the second pemphigus foliaceus.

Dr. Stelwagon, of Philadelphia, then read a paper entitled "The Individuality and Features of Impetigo Contagiosa." The writer said that while not admitted to be a separate and distinct disease by some German authors, and while considered by other Germans as a variety of ringworm, the French have scarcely alluded to its existence. Those who consider impetigo contagiosa as a variety of ringworm, in all probability have described cases in which ringworm coexists with the impetigo contagiosa. The fungus of ringworm is in reality never found in impetigo contagiosa. American observers, with the exception of Hyde, admit the individuality of the disease.

The writer then went on to describe his investigation into the question of the fungous origin of the disease. More than five hundred microscopic examinations had been made with the view of ascertaining if there is a fungus peculiar to this affection, but with a negative result. The fungus described by Piffard and that described by Kaposi had each been discovered in a very limited number of cases, but in each instance in the crust and not in the contents of the fresh vesico-pustules. In the latter only micrococci were found, just such as are seen in all vesico-pustules.

Dr. Stelwagon regards impetigo contagiosa as a separate and distinct disease, not parasitic nor related in any way to vaccinia, but as an acute, exanthematous, auto-inoculable disease and capable of indefinite prolongation on an individual by the fact of this auto-inoculability.

The paper, which was a peculiarly able one, was listened to with much attention, and the theory put forward as to the nature of this curious affection excited considerable discussion.

At the evening session, Dr. Atkinson, of Baltimore, read an account of a case of "Multiple Cachectic Ulceration," occurring in an infant two years of age, where ulcers formed spontaneously on the cheek, arms, legs, and one or more fingers. These did not originate in sloughs, but began as red points or as bullæ, and the tissues melted away by molecular disintegration until large areas, including the skin, muscles, and even bone, were involved. The little patient finally recovered under tonic treatment with generous diet. Mercurial intoxication, ergotism, diabetes, and scurvy were all carefully excluded as etiological factors. Dr. Atkinson believed the case to belong to the same category as those described by the late Oscar Simon under the designation "multiple cachectic gangrene." Eschoff and Cesar Boeck have also reported cases.

Dr. Van Harlingen, of Philadelphia, then read a paper entitled "Experiments in the Use of Naphtol," giving an account of this derivative of coal-tar introduced into use by Kaposi, of Vienna, a few years ago. Kaposi extols its virtues in scabies, psoriasis, eczema, hyperidrosis, prurigo, and various other skin-diseases. The writer had employed naphtol in a number of cases, finding it of high value in scabies, of less use in psoriasis and eczema squamosum of the head, but of little use in the other affections, so far as his experience goes. Other members of the Association who had used naphtol spoke of its merits in scabies, while expressing a rather poor opinion of the value of the drug in other diseases, based, however, on limited experience.

Dr. George H. Fox, of New York, followed with a paper entitled "A Trip to Tracadie," in which he gave an account of a recent visit to the leper settlement in New Brunswick. This settlement, which has now been in existence eighty years or more, is under the charge of Sisters of Mercy. The lepers are tenderly cared for, but no effort is made to give medical relief. There are at present twenty-four cases under care,—thirteen male and eleven female. Part of these belong to the macular and part to the tubercular variety. Three cases seemed not to be leprous in character. The first impression on visiting Tracadie is that leprosy is hereditary. Proof cannot, however, be found at this place, because the people have intermarried for generations, and all bear a very few family names, although they may not be related to one another. The spread of leprosy, in communities where we know anything about it, is too rapid for it to have been transmitted only by hereditary influence. On the other hand, no physician or nurse has ever been known to be attacked by the disease. The writer thinks leprosy directly contagious, as syphilis is, only in a lesser degree.

The last paper of the day was by Dr. Sherwell, of Brooklyn, on "Malignant Papillary Dermatitis, or Paget's Disease," illustrated by two cases.

The writer claimed priority for an article of his on this subject, published several years ago, and brought out the various characteristic points in the appearance of this affection.

The second day's proceedings were opened by the report of the Committee on Statistics, which, in the absence of the chairman, Dr. White, was read by Dr. Wigglesworth, of Boston. The statistics given included the combined returns from all parts of the United States and Canada for the past five years, and included between fifteen and twenty thousand cases observed by members of the Association. These statistics show the relative frequency of the various skin-diseases with great accuracy.

A paper was then read by Dr. Morrow, of New York, on the "Pathogenesis of Drug Eruptions," which, as the writer apparently maintained, arise from neurotic action.

Dr. Taylor, of New York, read a very interesting account of a case of "Polymorphic Changes occurring in the Tubercular Syphilides," describing an eruption originally papulo-squamous and psoriasiform in appearance,

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which developed tubercular, ulcerative, rupial, and gummatous lesions at one time and in various parts of the body. The report was accompanied by the exhibition of very handsome photographs and colored drawings.

Dr. Sherwell, of Brooklyn, read a paper entitled "Pseudo-Psoriasis of the Palm," in which he endeavored to give clinical evidence of his view that squamous psoriasiform eruptions occurring upon the palm are of necessity invariably syphilitic.

He was followed by Dr. Alexander, of New York, who, in a paper entitled "Psoriasis of the Palm," took the opposite view, and brought forward the carefully-compiled histories of four cases of undoubted psoriasis of the palm occurring in subjects free from syphilis. The excellent photographs of these rare cases attracted much attention.

Dr. Wigglesworth then read a paper by Dr. Hyde, of Chicago (who was absent by reason of sickness), entitled "A Study of the Coincidence of Syphilitic and Non-Syphilitic Diseases of the Skin." The principal feature of this paper was the minute and exhaustive clinical history of a psoriasis patient, who, after having suffered from repeated attacks of this disease during five years, and being all this time under Dr. Hyde's observation, was attacked by syphilis, which ran its course, developing a syphilitic eruption resembling the psoriasis, but to be distinguished from it in every lesion. Mercurial treatment removed the syphilitic lesions, leaving the psoriasis behind, to be afterwards removed by an entirely different course of medication.

The three foregoing papers were discussed together, but rather languidly, as the rapid succession of so much clinical matter was somewhat overwhelming. The evidence of opinion, so far as elicited, was opposed to the view of Dr. Sherwell and in favor of a psoriasis of the palm *sui generis* and owing nothing to the syphilitic taint.

At the evening session of this day, Dr. Taylor, of New York, read an exceedingly interesting clinical paper describing "A Peculiar Appearance of the Initial Lesion of Syphilis at its Beginning." The writer recalled the substance of a paper on this subject which he had published in the *American Journal of Syphilography and Dermatology* some years ago. He had the opportunity, both in that case and in one which had come under his notice recently, of observing the initial lesion from its very incipiency. In the more recent case, the patient had come to him within a few hours of the suspicious connection, and he had observed the initial lesion developing upon the surface of the glans penis, at first presenting the appearance of a pin-head-sized silvery spot, precisely resembling the sort of spot which would be made by the tip of a crayon of nitrate of silver; later, he had seen induration gradually set in, the surface become red and raw-looking, and the typical chancre appear to be followed by generalized symptoms.

Two other forms of early chancre were mentioned by the writer: 1, a minute, round, excoriated spot, like an erosion, generally of a sombre red, and not usually the seat of hyperæmia; its further course is enlargement in area and depth. It may be multiple. 2, the *papule sèche* of French authors, usually seen in retracted or absent prepuce. This may run its course, presenting the same characteristics, or it may change to the parchment-like chancre.

These clinical features are important to recognize at the earliest possible moment, in order that possible contagion may be averted.

Following this paper, Dr. Stelwagon read a paper by Dr. Duhring, of Philadelphia, in the absence of the author, the title of which was "The Value of a Lotion of the Sulphide of Zinc in the Treatment of Lupus Erythematosus." The formula for this wash was essentially as follows, although subject to modifications according to circumstances:

℞ Zinci sulphat.,
Potassii sulphuret., āā ʒss;
Aquæ rosæ, ʒiijss;
Alcoholis, ʒiij. M.

Glycerin, to the amount of a few minims, may sometimes be added to advantage. The lotion is soothing in its effects, and may be employed in the acute forms of the affection. Three cases were described where this wash had been used with marked benefit.

Another paper by Dr. Duhring, on "Ainhum," was read by Dr. Van Harlingen. This paper was accompanied by an exact and concise account of the microscopic appearances presented in this curious disease, the result of a series of careful investigations by Dr. Wile, of the University of Pennsylvania, one of Dr. Duhring's assistants.

Papers were presented by Dr. Hardaway, of St. Louis, on "A Peculiar Papular Disease of the Skin," resembling the colloid disease of Wagner and Besnier, and by Dr. Graham, of Toronto, on "A Peculiar New Growth of the Skin of the Arm." The latter case was accompanied by the presentation of those handsome photographs, nearly life-size, which were such a feature of this meeting. The case was considered one of dermatolysis with an element of lymphangeioma.

The last morning of the session was occupied in the examination of microscopic sections of ainhum and of malignant papillary dermatitis.

The following are the officers for 1883–84:

President.—Dr. R. W. Taylor, of New York.

Vice-Presidents.—Dr. Van Harlingen, of Philadelphia; Dr. Graham, of Toronto.

Secretary.—Dr. Alexander, of New York.

Treasurer.—Dr. Rohé, of Baltimore.

The next meeting will be held at West Point, New York, on the Wednesday nearest September 1, 1884.

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GLEANINGS FROM EXCHANGES.

ON SOME POST-EPILEPTIC PHENOMENA.—Dr. J. Althaus, Senior Physician to the Hospital for Epilepsy and Paralysis, in a paper read in the Section of Medicine at the annual meeting of the British Medical Association, made the following observations before describing a series of cases: "I wish to draw attention to certain either acute or chronic alterations of the mental faculties which have fallen under my notice, as direct consequences of epileptic attacks. I shall purposely exclude, in discussing this matter, any cases in which epileptiform seizures took place in consequence of gross organic lesions, such as tumor of the brain, chronic inflammation of the membranes and the gray surface of that organ, blood-poisoning of various kinds, and other diseases in which the convulsive paroxysms were only one symptom among many others; and I shall confine myself strictly to the consideration of those cases in which epilepsy occurred as a true neurosis, that still mysterious and unexplained functional disease of the gray matter of the brain, which is possibly owing to some kind of imperfect nutrition, but certainly not to any such structural alterations as would reveal themselves to our present means of research.

"The paper is based on an analysis of the cases of two hundred and fifty epileptic patients which have been under my care, in private and hospital practice, during a period of six years. Among these cases there were eighty-nine, or 35.6 per cent., in which no perceptible temporary or permanent alteration of the mental condition, which could be ascribed to the epilepsy, was to be ascertained, while in one hundred and sixty-one cases, or 64.4 per cent., such alterations did occur. Of the eighty-nine cases which escaped mental deterioration, sixty-one, or 68.5 per cent., were instances of nocturnal epilepsy, while in twenty-eight, or 31.4 per cent., attacks took place in the daytime. All, however, which escaped were cases of typical convulsive attacks, while in all cases of loss of consciousness without convulsion, or *petit mal*, and epileptic vertigo or automatism, a more or less permanent mental alteration was induced. Among the one hundred and sixty-one cases which were followed by mind-affection there were one hundred and twenty-three cases, or 76.5 per cent., of typical convulsive attacks; twenty-six cases, or 16.1 per cent., of *petit mal;* and twelve cases, or 7.4 per cent., of epileptic automatism.

"Among these patients there were ninety-one males, or 56.5 per cent., and seventy females, or 43.5 per cent. The ages of the whole series varied from five to sixty-two, and when these were distributed over decades it appeared that the decade from five to fifteen was at the bottom of the list with 10.5 per cent., while that between fifteen and twenty-five headed the list with twenty-four per cent., the other decades being very nearly even, with a medium of about sixteen per cent. The hereditary influence was marked in sixty-six cases, or 40.9 per cent. The nature of other predisposing or exciting causes, as far as they could be ascertained, did not appear to have exerted any special influence, since they were much of the same kind as in those cases in which the mind was not affected. I will, in passing, remark that I have excluded from the present considerations those cases which were apparently owing to injury to the head, syphilis, and masturbation, as these are of a complex character.

"The cases, therefore, which form the groundwork of this paper are only such where epilepsy was the primary event, and where some mental disturbance was observed subsequently to, and as a direct consequence of, the attacks. There are two forms of this disturbance,—viz., an acute one, where mental symptoms occur soon after attacks and disappear again after a certain time, and a chronic form, in which there is a gradual and permanent loss of mental power consequent upon attacks.

"The characteristic feature of the acute form of post-epileptic mental affection is its periodicity. Identical, or at least highly similar, symptoms are seen to occur year after year, and gradually become intensified unless they be checked by active treatment. They do not always occur immediately after attacks, but occasionally a day or two afterwards, and last a variable time, but rarely longer than a week. After such an attack is over, the patient has mostly no recollection whatever of what has occurred."—*British Medical Journal.*

ANTHRACÆMIA AND MALIGNANT PUSTULE.—Wool-sorters' disease, according to Mr. Spear, presents itself under two principal forms,—as a constitutional and as a local manifestation. He gives the following (*Medical Times and Gazette*, July 21) as the leading features of the disease in its different aspects:—

The Internal form, or "Anthrax fever."—Premonitory symptoms (of variable duration): chilliness, aching or stiffness of limbs, and mental depression; restlessness, sense of constriction of chest, and oppression of breathing; headache, dizziness, nausea, or, less frequently, vomiting. Stage of full development. Notwithstanding the indefinite premonitory symptoms, the stage of full development is generally somewhat sudden and unexpected in its onset, so as to cause much alarm. The prostration and restlessness become extreme; there are præcordial anxiety and dyspnœa; blueness of the face and extremities (cyanosis) is conspicuous; and the patient may die within twenty-four or thirty-six hours with all the appearances of collapse

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or of asphyxia. A fatal termination is, however, more often postponed until from two to five days after the commencement of this stage. Other nervous phenomena—muscular paralyses, convulsions, or tetanic spasms—are then likely to develop themselves; and evidences of various acute local congestions (especially of the lungs, less frequently of the gastro-intestinal tract) are rarely wanting. Delirium is often absent; and the temperature is irregular. Exacerbations, alternating with more or less complete remissions, of the more urgent symptoms constitute usually a striking feature of the disease. Recovery is not so rare as has been supposed, even in fully-developed attacks; but death may occur from a relapse, or from secondary septic processes. The body after death usually undergoes rapid decomposition, with blue discoloration and swelling, especially about the neck.

The External form of the Infection, or "Malignant Pustule."—The malignant pustule attacks almost always parts of the body habitually uncovered, and most frequently the face. It commences as a small papule, which quickly develops into a vesicle, and this, being broken, pours out a little watery exudation. The base of the vesicle, and the surface immediately adjacent, dies; so that in about three days after its appearance the lesion consists of a small central black eschar, with a raised border of inflamed and tumid skin upon which vesicles are likely to be developed; a crop of secondary vesicles surrounding thus the central eschar like a wreath. The neighboring lymphatics and glands are speedily implicated; and the patient may soon lapse into the condition, described above, of constitutional infection. The pustule does not apparently always present this typical appearance: when occurring upon the hands such appearance is uncommon. It has then no central black eschar, no raised vesiculated border. It is described as "a small, slightly-inflamed tumor, exuding only serosity; giving rise to comparatively little pain or even increased sensibility, but showing a tendency to set up a diffuse cellulitis." Constitutional infection may follow.

THE COMPARATIVE ADVANTAGES OF SCRAPING AND SCARIFICATION IN THE TREATMENT OF LUPUS VULGARIS.—In a paper read in the Section of Surgery at the annual meeting of the British Medical Association in Liverpool, August, 1883, Mr. Morris speaks highly in favor of free erosion by means of a blunt spoon. He remarks, "The plan I adopted was, with a few minor modifications, identical with that originated by Volkmann in 1870. With a large spoon all scabs are thoroughly removed, and with them the great bulk of the superficial deposit, and after drying the surface the minute nodules, which are deeply lodged in pockets of the corium, are dug out with smaller and pointed scoops. The margins are also vigorously scraped. The spoon should be applied till the whole of the soft friable lupus-tissue has been removed and only the firm resistance of the sound parts is met with. Though the greater portion of the disease may be removed at one operation, some of the smaller deep-seated nodules which have escaped will reappear in the scar, and require subsequent treatment. After the healing of the wound produced by the operation a scar with more or less loss of substance is left."

In comparing scraping and scarification, he observed that though the former has the advantage of rapidity, in the character of its scar it is much inferior to the latter. Scraping is, after all, a destructive method, similar to, though milder than, the older forms of treatment, as it mechanically removes the diseased material, whereas scarification is essentially conservative in its action. The incisions, by cutting off the blood-supply, modify the nutrition of the new growth, and lead to its atrophy with a minimum loss of substance. In addition, in the severe forms of lupus exedens, in which scraping fails, or even aggravates, scarification acts most rapidly and completely. A further though minor advantage is that scraping, on account of the pain, requires an anæsthetic, which can be dispensed with in scarification.—*British Medical Journal.*

CANCER-REMEDY.—A correspondent of the *British Medical Journal* (No. 1175) reports that great relief has been experienced from the use of "clivers" (*Galium aparine*) as a remedy for cancer. When applied locally, it reduces the size and diminishes the pain of cancer. In Hertfordshire it is also used internally, the directions being as follows: The bowels having been previously cleared by aperient medicine and the patient enjoined to live on most simple diet, five ounces of the juice of the plant (obtained by pounding and squeezing) are to be taken twice daily; at the same time an ointment of the juice is to be applied to the cancerous ulcer, laying the bruised plant over it, and keeping the dressing constantly applied and frequently renewed. The amendment is very gradual, so that steady perseverance in the use of both internal and external means is necessary. According to one account, in three months the ulcer had perfectly healed.

POISONING BY CITRATE OF CAFFEINE.—At a recent meeting of the Medical Society of London Dr. Routh read notes of a case of poisoning by citrate of caffeine. The drug had been prescribed in drachm doses, three times a day, for the relief of severe headache in a man under treatment for debility. Bishop's effervescent preparation was intended, but the pure drug was sent. Fifty minutes after taking one powder he complained of burning sensation in the throat, and of giddiness; there was vomiting and purging, with pain in

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the belly. He then became almost paralyzed, and was affected with tremors, but his intellect was clear. Dr. Routh found him an hour later collapsed; pulse about 120. Ipecacuanha was given as an emetic, but, as this failed to act, some animal charcoal, with nitrite of amyl and ether, was given. Vomiting subsequently took place, and ammonia, alcohol, and nitro-glycerin were given. For some hours he remained much depressed, and did not rally completely till 1.30 A.M. next day, or nine hours after taking the caffeine. Nitroglycerin solution in one-minim doses was given every two hours, with digitalis, and in about three days he recovered.—*Practitioner.*

A NEW PROPERTY OF THE RED BLOOD-CORPUSCLES.—At a meeting of the Italian Medical Association, Dr. Fano related his experiments with peptone, and spoke of the rapid cessation of the reaction of peptone in the blood. He demonstrated the transformations of peptone absorbed by the digestive tract or transfused into the blood-current, and how peptone may be transformed and stored up by the morphological elements of the blood. The transformation consists in a process of dehydration, by which the peptones are changed into coagulable albuminoids. The active elements of this transformation are the red corpuscles, which, assimilating the peptones that enter into the circulation, increase the specific weight. It is probably to the potash salts which the red corpuscles contain that this dehydration of the peptones is due, by which they are transformed into globulin. For this process to take place, the presence of oxyhæmoglobin is an indispensable condition. The stored-up albuminoids serve as a reserve supply of aliment, which is given up to the tissues as required. —*Druggist's Circular and Chemical Gazette.*

REMOVAL OF CARIOUS PORTIONS OF THE VERTEBRAL BODIES.—Dr. Boeckel relates (*Schmidt's Jahrbücher*) the history of a case in which he removed the carious portion of the bodies of two dorsal vertebræ by means of the sharp spoon, with gratifying results. From his experience in this case and in operations upon the cadaver, the writer concludes that it is not so difficult as is usually supposed to reach the anterior portion of the spinal column. The resection of an inch to an inch and a half of one rib affords room enough for the finger to reach the bodies of the diseased vertebræ. The danger of wounding any of the great vessels lying in front of the spinal column is not so great as it seems, as the pus has already formed a sinus which serves as a guide to the diseased bone. The bodies of the lumbar vertebræ may be reached by an incision made at the outer border of the sacro-lumbalis muscle, as for nephrotomy. The same operation is indicated in gunshot wounds of the vertebral bodies. The difficulty in such cases lies less in the operation itself than in the uncertainty of the diagnosis respecting the location and extent of the injury to the bone.—*Practitioner.*

OIL OF BIRCH.—From an examination of pure volatile oil of birch, made in the chemical laboratory of the Philadelphia College of Pharmacy, Mr. Pettigrew found that chemically it is the salicylate of methyl; it contains no terpene, and is therefore not identical with the oil of gaultheria, as suggested by Procter. The specific gravity of oil of gaultheria is 1.0310, and not 1.180, as stated in the United States Pharmacopœia, this being the specific gravity of the volatile oil of birch, which is often indiscriminately sold and employed as oil of gaultheria.—*American Journal of Pharmacy*, August, 1883.

PARAPLEGIA IN A CHILD CAUSED BY INTESTINAL WORMS.—A child of 10 years was brought to the London Hospital and placed under the care of Dr. Thorowgood as a case of infantile paralysis. She had lost strength in her lower limbs gradually, for three months had been unable to walk, and was then quite unable to stand. The legs were not much wasted. Upon inquiry, it was ascertained that the patient also had been troubled with ascarides. An aloetic purgative mixture was given for several days, which acted well and brought away many worms. In two days she was able to run and walk about the ward as well as could be desired; and a few days later, as she seemed perfectly well, she was allowed to go home.—*Lancet*, July 28.

CEREBRAL HEMORRHAGE IN PURPURA.—J. S. Bristowe, M.D., reports two cases of fatal cerebral effusion during an attack of purpura hæmorrhagica in a man aged 53 years and in a woman aged 57 years. The symptoms of purpura were well marked.—*Medical Times and Gazette*, July 28.

MISCELLANY.

MARINE HOSPITAL SERVICE.—The St. Louis *Post-Dispatch* of June 23 publishes an *exposé* of the management of the United States Marine Hospital in that city. A visit to it by one of its reporters resulted in the discovery that while there are handsome buildings on the grounds, admirably adapted for hospital purposes, the patients, twenty-five in number, are housed in an old shed, utterly unfit for occupation by human beings. One of these, a pilot who was horribly burned in an explosion three months ago, was found in a pitiable condition, at the mercy of a brutal nurse, who cursed and neglected him, and covered with a ragged sheet, which was saturated with gravy, medicine-stains, and other filth, upon which swarms of flies were gorging themselves. The man was afraid to talk, but said that his treatment was horrible; that the bed he lay

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on, hardened by drippings from his linseed bandages, became in spots as hard as rock, producing agony of which it was useless for him to complain. A fireman engineer stated that his brother, whom he removed from the hospital yesterday, was horribly treated. On one occasion he found him covered with a dirty sheet which he recognized by a filthy stain as the same one which was on the bed a fortnight previous, the bedclothes not having been changed in that time. A vessel used by his brother presented indisputable evidences of not having been cleaned for several days. The healing of wounded patients is greatly retarded by the presence in the same ward of others suffering from erysipelas and syphilis, whose wounds are all dressed by the same nurse. These hospitals are supported by a tax of forty cents a month on all persons employed on steamboats, and the two men whose hardships have been published had paid this tax for twenty and forty-five years respectively.—*Sanitarian.*

THE OWNERSHIP OF PRESCRIPTIONS IN FRANCE.—A rather curious lawsuit lately took place before the justice of the peace at St. Germain, in which a pharmacist was prosecuted for having refused to give up a prescription that was taken to him by a patient. The patient claimed the prescription as being his property, which the druggist contested; but the tribunal decided otherwise, and the prescription was restored to the patient. The Société de Médecine Légale, commenting upon the case, admitted that the decision of the judge was unassailable from a legal point of view, but took the same ground as most medical societies in this country,—namely, that the repetition of prescriptions is sometimes injurious to patients, and always detrimental to physicians, in a pecuniary sense.—*Druggist's Circular and Chemical Gazette.*

PHENO-RESORCIN.—This name has been given by F. Reverdin to a mixture prepared by melting together carbolic acid, sixty-seven parts, resorcin, thirty-three parts, and finally adding ten parts of water. It then remains liquid and has the advantage of being soluble in water *in all proportions.* The two substances are analogous in properties, and may therefore well be combined.—*La Ruche Pharm.; New Remedies.*

THE THIRTY-FIRST ANNUAL MEETING of the American Pharmaceutical Association will convene in Washington, D.C., September 11, at three o'clock P.M., in the Smithsonian Institution. The officers are Mr. Charles A. Heinitsch, of Lancaster, *President;* Prof. J. M. Maisch, of Philadelphia, *Permanent Secretary;* Mr. George J. Seabury, of New York, Chairman of Committee on Entertainments, and Mr. G. W. Kennedy, of Pottsville, Pa., Chairman of Committee on Membership.

PARKMAN PROFESSORSHIP OF ANATOMY IN THE HARVARD MEDICAL SCHOOL.—Dr. Thomas Dwight has been appointed to the chair of anatomy, the duties of which he has discharged during the past winter on account of the resignation of Dr. Oliver Wendell Holmes.

ADVANCE OF THE METRIC SYSTEM.—The British Mint has discarded carats and carat-grains, and will hereafter indicate the fineness of precious metals by decimals, in accordance with the usage long since adopted by the Continental mints.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY FROM AUGUST 18 TO SEPTEMBER 1, 1883.

CLEMENTS, BENNETT A., MAJOR AND SURGEON.—Relieved from duty with the Army Medical Examining Board, New York City, New York. Paragraph 11, S. O. 193, A. G. O., August 22, 1883.

MIDDLETON, J. V. D., MAJOR AND SURGEON.—Relieved from duty at Fort Hays, Kansas, and assigned to duty at Fort Leavenworth, Kansas. Paragraph 2, S. O. 169, Department of the Missouri, August 18, 1883.

WILLIAMS, JOHN W., MAJOR AND SURGEON.—Granted leave of absence for one month on surgeon's certificate of disability. Paragraph 1, S. O. 109, Department of the Columbia, August 8, 1883.

BARTHOLF, JOHN H., CAPTAIN AND ASSISTANT-SURGEON.—Assigned to temporary duty at Vancouver Barracks, W. T. Paragraph 2, S. O. 109, Department of the Columbia, August 8, 1883.

FINLEY, J. A., CAPTAIN AND ASSISTANT-SURGEON.—Relieved from duty at Fort Concho, Texas, and assigned to duty at Fort Stockton, Texas, as post-surgeon. Paragraph 1, S. O. 101, Department of Texas, August 16, 1883.

KIMBALL, JAMES P., CAPTAIN AND ASSISTANT-SURGEON.—Relieved from duty in the Department of the Platte, and to proceed to New York City and report in person to the President of the Army Medical Examining Board for duty as a member of that Board, *vice* Surgeon Clements, relieved. Paragraph 11, S. O. 193, A. G. O., August 22, 1883.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY FROM AUGUST 25 TO SEPTEMBER 1, 1883.

Assistant-Surgeon A. A. AUSTIN ordered to Naval Hospital, New York.

Assistant-Surgeon T. C. CRAIG detached from the Naval Hospital, New York, and ordered to the U.S. steam-ship "Minnesota."

P. A. Surgeon M. H. CRAWFORD detached from the U.S. steam-ship "Pinta," and placed on sick leave.

P. A. Surgeon W. G. G. WILLSON detached from the "Minnesota," and ordered to the "Pinta."

Surgeon CHARLES H. WHITE ordered to the Museum of Hygiene, Washington, D.C.

P. A. Surgeon J. H. BRYAN detached from the Museum of Hygiene, and ordered to the "Miantonomoh."

P. A. Surgeon D. M. GUITERAS ordered to the Navy-Yard, Pensacola, Florida.

Surgeon T. C. WALTON detached from the "Powhatan," and ordered to the Naval Academy, Annapolis, Maryland.

Surgeon W. J. SIMON detached from the U.S. steam-ship "Constellation," and placed on waiting-orders after completing temporary duty as member of a Board at Annapolis, Maryland.

P. A. Surgeon W. A. MCCLURG detached from the U.S. steam-ship "Dale," and ordered to the Naval Academy.

Assistant-Surgeon OLIVER DIEHL detached from the U.S. steam-ship "Constellation," and ordered to the Naval Academy.

P. A. Surgeon M. D. JONES ordered to temporary duty at the Naval Hospital, Washington, D.C.

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PHILADELPHIA, SEPTEMBER 22, 1883.

ORIGINAL LECTURES.

CLINICAL LECTURE.

A CASE OF EPILEPTIFORM CONVULSIONS, ACCOMPANIED BY GREAT ENLARGEMENT OF THE LIVER AND SPLEEN, DUE TO TERTIARY SYPHILIS—THE POST-MORTEM RESULTS IN A CASE OF RHEUMATISM COMPLICATED BY PERICARDITIS, ENDOCARDITIS, AND PLEURISY—THE AUTOPSY OF A CASE OF INTRACRANIAL TUMOR.

Delivered at the Pennsylvania Hospital

BY JAMES H. HUTCHINSON, M.D.,

One of the Attending Physicians to the Hospital, Physician to the Children's Hospital, etc.

Reported by WILLIAM H. MORRISON, M.D.

A CASE OF EPILEPTIFORM CONVULSIONS, ACCOMPANIED BY GREAT ENLARGEMENT OF THE LIVER AND SPLEEN.

GENTLEMEN,—The first patient whom I bring before you this morning gives us the following history: S. H., age 37, born in England, single, a machinist by occupation. His father, mother, brothers, and sisters are living and healthy. In 1865 he had an attack of intermittent fever lasting two weeks. He had a second attack in 1870, since which time there has been no return. In 1865 he had an attack of jaundice; in 1866 he contracted a chancre, which was followed by secondary symptoms. With these exceptions, he had good health until three years ago, when he had a convulsion. Since then he has been subject to convulsive attacks, which recur at intervals of from one to three weeks. These come on suddenly without warning, are accompanied by loss of consciousness, and are followed by sleep.

About three weeks ago he observed a swelling of the abdomen; he felt weak and miserable, his appetite failed, he lost flesh, and was obliged to quit work. He states that during the past few months he has passed large quantities of water,—as much as two gallons during the twenty-four hours. We have nothing but his statement for this, and it is doubtful that the amount is as great as this. He has always been of temperate habits.

He was admitted December 15, 1882. On admission he was found to be anæmic and jaundiced; the appetite poor; bowels regular; liver and spleen found enlarged; pain in the splenic region; no œdema.

December 16, the urine for the past twenty-four hours was measured and found to be fifteen pints. Its specific gravity was 1010. Neither albumen nor sugar was present.

December 24, he had two convulsions two hours apart. As the attacks came on he made a great deal of noise and struggled; during the convulsions his face was very much congested.

December 25, another convulsion; not so severe. Passed six pints of urine.

January 7, great deal of nausea; diarrhœa. Another convulsion. Was ordered

Acid. carbolic., gr. $\frac{1}{4}$;
Morph. sulph., gr. $\frac{1}{24}$. M.

To be repeated every four hours.

January 8, another convulsion. Was ordered bromide of potassium three times a day.

January 31, has not had another convulsion; otherwise his condition is much the same.

He had two convulsions last night (February 6).

There is in this case a history of two diseases which are very likely to leave more or less permanent effects. There is, in the first place, a history of malarial poisoning which occurred a number of years ago and then recurred in 1870, since which time he says that he has had no chills. In the second place, there is a history of syphilitic poisoning in 1866. This was followed by unmistakable secondary symptoms,—sore throat, loss of the hair, pains in the bones, etc.

Finding this history of repeated convulsive seizures, I proceeded to make an ophthalmoscopic examination. On introducing a solution of sulphate of atropia to dilate the pupil, I found that while one pupil dilated quickly and regularly, the other at first did not dilate, and when it did it was in an irregular way. In the left eye there are adhesions preventing the lower part of the pupil from dilating. This, which is the result of iritis, is another proof of the syphilitic infection. There is also on this man's head a node, which he discovered three or four weeks ago, but which has probably existed for much longer time.

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Having shown you this much, I shall next proceed to demonstrate the condition of his spleen and liver. You will recollect that the notes say that there is great enlargement of the spleen and liver. It appears that the swelling of the abdomen has been only observed for a short time past; but I think, as I did in regard to the node, that it has existed for a much longer time. In patients belonging to this class of life, symptoms which do not positively interfere with labor are rarely noticed.

I find in the left hypochondriac region a tumor. This extends down in the line of the nipple to the level of the umbilicus; indeed, it goes a little below it, and extends to within an inch and a half of the median line. Posteriorly it is lost behind the ribs, and the muscles are so tense that I cannot get at its borders. It descends a little with respiration. I shall show you that the dulness of this tumor is continuous with that of the spleen. In determining the boundaries of the spleen by means of percussion, the patient should be turned half-way on his side. The percussion-note is dull all over this region until I reach the lower border of the tumor, when I obtain a clear sound due to the presence of intestines.

From this examination there can be no doubt that there is great enlargement of the spleen. This has probably existed for a great many years, and is, I think, due to the first of the diseases to which I have referred, or to the first in connection with the second. This enlargement is not infrequently seen in malarial poisoning. Before the disease was treated as promptly as it is now, this condition was seen far more frequently; but scarcely a term of service which I have spent in this hospital during the past fourteen or fifteen years has passed in which I have not seen a case of splenic enlargement due to malarial poisoning.

Splenic enlargement is not all that we have. As the patient lies on his back you can see that the right hypochondriac region is quite prominent. This is more marked below the ribs in front than it is laterally. The hepatic dulness begins just below the line of the nipple, and extends some distance below the margin of the ribs. There is enlargement of the liver, but it is not symmetrical: I find that it is most marked in the anterior region. We have now to account for the hepatic enlargement. There may, of course, be an increase in the size of the liver from the same cause (malarial poisoning), but in all the cases dependent on this cause which I have seen, the liver has been uniformly enlarged. In this man the enlargement is more prominent in one region than in another. I am inclined to attribute this to the syphilitic poison. Syphilitic enlargement of the liver is frequently irregular.

Let me next speak of the convulsions. These are probably due to syphilitic disease of the brain. What the exact character of the disease is I am not prepared to say. We, however, know that syphilitic disease frequently gives rise to convulsions, while on the other hand malarial poisoning does not do so to any great extent. I have, however, seen convulsions occur once or twice during the chill. In these cases there must have been some predisposition to convulsive seizures, for this complication is very rare. In this case there may be a node upon the internal surface of the skull, or there may be disease of the membranes or disease of the brain itself. The most probable of these is the formation of a node.

I now turn to the treatment. The indications are various, and, to a certain extent, at variance one with the other. We have malarial poisoning and syphilitic poisoning, and we have the results of the two diseases to treat. The symptoms due to syphilis seem to be the more prominent, and those which require treatment at the present time. This patient should be placed on the iodide of potassium in large doses. I should not give it in five-grain doses, but in thirty-grain doses three or four times a day. If the convulsive seizures did not diminish in frequency under this treatment, I should push it still further. There is, of course, a doubt whether such large doses are absorbed, but where life is in danger from the syphilitic poisoning I think that it is better to run the risk of giving more than can be absorbed than to give less than might be absorbed. It might be thought to be proper to treat the epileptiform convulsions, but I think, as they are due to syphilitic disease of the brain, they will be relieved by the iodide of potassium. We know, however, from the history of the case, that the bromides have been of service; there is, therefore, no objection to continuing this remedy in proper doses. In such a case I should be, however, more

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disposed to rely upon the iodide than upon the bromide of potassium.

The man has also enlargement of the spleen, due to malarial poisoning; but, as there are no chills, quinia is not necessary. The injection of five grains of ergotin dissolved in a small quantity of water into the tissues over the spleen twice a day will, I think, prove of service. I do not know that there is any special advantage in injecting it over the spleen, but this is the usual place for doing it. It has been recommended to inject ergotin or iodine into the substance of the organ, but I should hesitate to resort to this unless the indications were much more marked than in the present case. There is always risk in these injections of producing inflammation and subsequent peritonitis. The injection of ergotin into the tissue over the spleen does not often give rise to abscess, and the liability to abscess may, I think, be in great measure avoided by painting the part where the injection is made immediately afterwards with tincture of iodine.

The prognosis is, I think, on the whole, favorable. I do not know of any class of cases which do better under treatment than do those of syphilitic disease. As the patient is not entirely broken down, there is reason to hope for considerable improvement.

You might ask if it would not be well to give some preparation of mercury. I think not. In tertiary syphilis mercury often does more harm than good. I sometimes add to the iodide of potassium a little bichloride of mercury, which is the least objectionable of all the mercurial preparations. I do this only when syphilis is passing from the secondary to the tertiary stage. Under these circumstances it is sometimes a useful addition.

THE POST-MORTEM RESULTS IN A CASE OF RHEUMATISM COMPLICATED BY PERICARDITIS, ENDOCARDITIS, AND PLEURISY.

Among the patients in the ward, when I took charge of it a few days ago, was a young man suffering from an unusually severe attack of rheumatism. Not only did it affect many of the joints, but when I took charge of him there were also well-marked evidences of pericarditis. The patient did fairly well for a day or two, and the joint-affection even seemed to subside for a time. Unfortunately, this improvement was only temporary, and in a short time there was a recurrence of high temperature and an exacerbation of the cardiac symptoms.

The treatment was that which is usually employed in this house,—*i.e.*, salicylate of sodium in large doses frequently repeated. In addition to this remedy we also gave, in consequence of the cardiac complication, digitalis, and at different times opium in the form of Dover's powders. To relieve the pain, the patient, as I have said, after doing fairly well for a short time, became worse, and on Sunday died.

The physical signs which clearly revealed the presence of pericarditis were, in the first place, friction-sounds. When, under ordinary circumstances, we listen over the præcordial region, no sound is heard from the two surfaces of the pericardium gliding over each other; but, even if this membrane become dry, there will be a grazing sound, simple dryness being sufficient to give rise to a slight sound. If inflammation occurs and exudation takes place, there will be a rubbing sound which differs in its character entirely from the endocardial murmurs. The endocardial sounds are blowing, the exocardial is rubbing. The latter may be heard all over the heart. They have a to-and-fro character. In some instances there is but a single murmur produced by friction. It is at times difficult to distinguish between such a murmur and an endocardial sound; but usually, by careful attention to a few points, the diagnosis may be made. Endocardial sounds correspond either with the systole or the diastole of the heart, and are therefore heard with the first or second sound; exocardial sounds are apt to occur between the cardiac sounds. The endocardial sounds are propagated to a great distance from the heart; exocardial sounds are heard only over the region of the heart.

There was in this case, in addition to the friction-sound, some dulness on percussion at the base of the heart. The sound obtained by percussing over the second intercostal space of the left side was much duller than that obtained in the same position on the right side. When effusion takes place, the pericardial sac is usually first distended at its upper part: you should therefore always look for a slight amount of effusion in this region. The fact that a friction-sound could be heard showed us that the quantity of effusion was not great, for if the amount of liquid were great, the two surfaces of the pericardium could not respi-

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in contact, and no sound would be produced.

I now ask your attention to the examination of the heart, which we removed at the autopsy. You see all over its surface the evidences of exudation: this appearance has been compared to that of a beef's tongue. The amount of effusion was very small; part of the dulness heard at the base of the heart was probably therefore due to infiltration of the pericardium. A few adhesions uniting the two layers of the pericardium were also found.

I forgot to mention, while speaking of the cardiac sounds, that on listening very carefully I also heard an endocardial murmur. This had very little intensity: it was only by a careful examination that it could be recognized. There are here evidences of slight inflammation of the endocardium, which should account for this sound.

This patient was also the subject of pleurisy; in fact, it is probable that the pericarditis alone would not have been sufficient to kill him. He had on one side pleurisy with effusion. The embarrassment of the respiration due to the effusion, added to the embarrassment of the circulation, was the cause of death. An examination during life revealed dulness on the right side, but it gave the patient so much pain to disturb him that, after determining the presence of effusion, I did not continue the examination further. Here is the right lung, which presents an appearance similar to that of the pericardium. There is a deposit of fibrin on the pleural membrane; the left lung was adherent to the sides of the chest.

In making a careful post-mortem, Dr. Morris Longstreth found the mesenteric and intestinal glands slightly calcareous. This man had typhoid fever ten years ago. This is interesting, as it gives us the opportunity of examining the condition of the glands several years after the attack of typhoid fever. I here show you some of the glands in this condition. I do not think that these could have ulcerated, for I do not see any cicatrices.

The post-mortem in this case reveals, then, well-marked pleurisy, well-marked pericarditis, slight endocarditis, and the evidences of old disease in the intestines.

THE AUTOPSY OF A CASE OF INTRACRANIAL TUMOR.

IN THE You may recollect that on at least two sions during the past few months I showed you a patient from the female medical wards, who had a tumor on each side of the neck, with a protuberance of the left eye, and paralysis of almost all the cranial nerves of that side. The olfactory and optic nerves did not seem to be involved; there was paralysis of the parts supplied by the third, fourth, fifth, sixth, seventh, and eighth nerves of the left side; the muscles moving the tongue were not affected: it was therefore probable that the hypoglossal nerve was not involved. The pneumogastric also escaped, for there was no interference with respiration or with the action of the heart.

When I first saw the patient, six months ago, with my colleague, Dr. Arthur Meigs, she presented a very different condition from that which she did when you first saw her. The most prominent symptom at that time was supra-orbital neuralgia. The paralysis which I have mentioned did not at that time exist, or, if it did, only to a slight degree. I attempted to make an ophthalmoscopic examination, but found the iris so adherent that it was impossible for any but an expert to obtain a good view of the fundus. In addition to the adhesions, there were opacities of the cornea. At my request, Dr. Harlan made the ophthalmoscopic examination, but found no choked disk. There seem then to have been no evidences of interference with the circulation of the brain.

When I took charge of her there was paralysis and intense pain, and the existence of a tumor on the right side of the neck, which to a certain extent rendered the diagnosis clear. It seemed not improbable that if there were a tumor outside of the skull there might also be one inside causing the paralysis and neuralgia. It at first seemed likely, in consequence of the iritis and the irregularity of the patient's past life, that the disease might be specific; but upon a more careful investigation and a more thorough study of her history there appeared to be no good ground for this supposition. A few weeks after I took charge of her, a second tumor began to appear on the left side of the neck. This was very painful to the touch, and increased rapidly in size. The presence of these tumors furnished important evidence as to the character of the disease within the skull.

The next point was to determine the seat of the intracranial disease. This we

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were enabled to do by a careful study of the symptoms. Finding the parts supplied by the nerves which I have indicated paralyzed, we of course concluded that the disease must be situated at a point where it would involve these nerves. This point must be in the neighborhood of the petrous portion of the temporal bone. Most of the nerves implicated either originate from the brain or pass from the skull at this point. The question as to whether the disease sprang from the bone or from the membrane could not, I think, have been answered during life. If syphilitic, or if cancerous, it might come from either: there were no evidences of disease of the bone or of the membrane. The patient died a few days ago.

At the autopsy it was found that the disease was situated exactly at the position where we had expected to find it. I have here the petrous portion of the temporal bone, with a portion of the sphenoid bone of the left side: there is here a tumor as large as a walnut. As I have said, there were no signs of affection of the optic nerves during life; after death they were found to be a little flattened, but they did not pass through the tumor, and were not diseased; neither were the olfactory bulbs pressed upon. The hypoglossal and pneumogastric nerves are given off so far back that they escaped: if there was any impairment of vision, it was exceedingly slight, but all that could be detected might be explained by the opacity of the cornea.

The tumor pushed the brain slightly towards the opposite side, but it did not extend beyond the median line; the left eyeball was so prominent (preventing the closing of the eyelids) that we at one time suspected that a tumor was developing within the orbit; but none has been found. We have not had time to examine these growths under the microscope, but this will be done.

The post-mortem in this case very thoroughly explains the paralysis noted during life.

INODOROUS IODOFORM.—The peculiar odor of iodoform is found to be well masked by the addition of attar of rose, one minim to the drachm, or of essence of rose geranium, three or four minims to the drachm. The clinic-room gets to smell like a florist's shop. —*Polyclinic.*

ORIGINAL COMMUNICATIONS.

CATARRHAL PNEUMONIA IN INFANTS AND OLDER CHILDREN.

BY E. T. BLACKWELL, M.D.

PATHOLOGISTS have in recent years divided the disease formerly known as pneumonitis, pneumonia, and inflammation of the parenchyma of the lungs, into two separate disorders, each of which has its seat in the structure of the air-vesicles, and affects, in varying degrees, the blood-vessels, nerves, and connective tissue so intimately connected therewith. Both forms have some associated bronchitis, and, if situated near the surface of the lungs, pleurisy more or less severe. They differ from each other in the manner of their invasion, in the type of their fever, in the character of the effused product, and in the physical signs which arise in their progress.

One division, which answers to the classical pneumonia of most authors, invades the alveoli, causing therefrom a plastic exudation with both red and white corpuscles, and is called croupous pneumonia. The other affects the same anatomical structure, but its exudate lacks the plastic character and red color of the first, and soon degrades into pus. Since it occurs as a sequel to catarrh and to eruptive diseases in which catarrh is a conspicuous element, it is called catarrhal pneumonia. The two have many leading symptoms in common, which vary in extent and degree. These are fever, rapid breathing with great change in its ratio to pulsation, pain, cough, expectoration, and a bluish hue of the skin and mucous membranes.

The fever in croupous pneumonia is marked by evening exacerbations and morning remissions, the extremes of temperature standing at about 105° and 102° Fahr. Should the pleura be involved, the pain may be considerable, and cause the patient to restrain the movement of the ribs as much as possible by lying on the affected part; if otherwise, the pain is insignificant or absent, the patient lying upon the back or indifferently. Expectoration, if present, is scanty, consistent, tenacious, and intimately mixed with blood. Percussion, at first slightly tympanitic, soon loses this character, and runs through all the shades of dulness to that indicating complete consolidation. The respi-

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ratory murmur, little changed at first, soon is marked on inspiration by a fine crepitant râle. The bowels are generally constipated, and there are the usual secretory disturbances attendant on pyrexia.

Catarrhal pneumonia has no regular type of fever; its diurnal variations are irregular, the maximum occurring sometimes in the morning, sometimes at night. In the pneumonia of measles the temperature may reach 105.5° Fahr., and continue for days with but slight remissions, the pulse remaining frequent even after the temperature has fallen. In children, who furnish the most of the cases, the rate is often extreme, so frequent as scarcely to admit of counting. There is moaning and crying. The expectoration is whitish, frothy, and diffluent. Both inspiration and expiration are from the outset accompanied by a mucous or subcrepitant râle derived from the catarrh of the bronchioles. In the progress of the disease it may become a crepitant râle, as in the other variety. The percussion, somewhat dull at first over the collapsed portion of the lungs from absence of air, becomes decidedly so in the later stages from effusion into the air-cells. The upper or unaffected portion of the lungs is tympanitic throughout the disease. Joergensen, whose description I have followed, among the symptoms of the catarrhal variety does not reckon changed ratio of respiration and pulse, which is made so prominent in his description of croupous pneumonia. If I am correct in the diagnoses of the cases appended to this paper, it will be seen that the departure from the normal ratio in this form is also very remarkable. The inflammation includes the bronchial tubes of all calibres in the catarrhal, and may even seize upon the trachea and larynx; in the croupous the bronchioles only are involved.

The differential diagnosis, scarcely possible in many cases, is perhaps not greatly important in a therapeutic point of view. In both we have to resist the same forces, fever and inflammation. We shall attack them simultaneously,—the local development by revulsives, and the fever by the usual antipyretics. In open and sthenic cases the therapeutical means at our command are equal to the cure of the diseased condition; in the asthenic we may find all remedies, especially all lowering forms of treatment, utterly barren of good results.

In the *Philadelphia Medical Times*, vol. x., I reported a short series of cases of pneumonia of an adynamic form, submitting the view of Joergensen that such cases might be true examples of infectious fever with a low type of local development in the lungs. Antipyretics and revulsives were useless, in these cases, to change the morbid action or check the march to dissolution.

Our German friends, who have labored faithfully to establish the individuality of the two forms of pneumonia, have afforded us little help in the way of treatment. Their suggestions on prophylaxis and hygiene are sound, but their great weapon, the cold bath, needs to be used with great caution, and is dangerous except there be constant and skilful supervision and watchful intervention. At private houses these essentials are not attainable. The things condemned by them include both good and bad measures. Among the latter, that known as the contra-stimulant treatment—the saturation of the blood with tartrate of antimony—should meet the hearty reprobation of all judicious physicians, but their banishment of blisters deprives their patients of a certain means of relief, if used early and effectually. The decoction of senega, extolled by them, should be made to give way before the mixture of myrrh, a drug imparting great tone to the mucous membrane, the relaxed condition of which the former rather intensifies and fixes. It is, besides, nauseous and disagreeable to more than one of the senses. When we mark the result of their practice, we shall not be greatly encouraged to try it upon our patients. Bartels lost, in catarrhal pneumonia, all under one year; after that period one-third. Ziemssen lost one-half under the age of one year; from one to three years old, about two-fifths; in the later years, only one-fourth.*

Outside the cases already reported, and two others beyond the age of vigor in which the treatment of Rasori was used with unfavorable results, my experience has included a few cases happening in early adult life, and many children, especially infants of the first and second year. During the last thirty years, in which I have used the treatment detailed below, recovery has been the rule. When called to attend the tenderest infant with quick

* Ziemssen's Cyclopædia, vol. v. p. 222.

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respiration, a short, suppressed cough, and fever, I placed immediately upon the chest either a mustard-poultice to be used perseveringly or a blister to the whole surface, following the outline of the thorax. Appropriate internal means were used in connection. The crepitant râle, if not heard at the first visit, was sure to set its seal to the correctness of the diagnosis. The following, from their mode of invasion, symptoms, and general behavior, are believed to be examples of catarrhal pneumonia, although, if paroxysmal fever and rapid breathing be peculiar to croupous pneumonia, they cannot be separated from that variety. The gravity of the cases and the success of the treatment may be deduced from a study of these examples:

Case I.—Bertie B., a robust child of 22 months, residing in Philadelphia in a house used partly as a stable, about and beneath which manure was constantly fermenting, was taken, January 18, 1882, with catarrh, which presented no characteristics worthy of note. For this she was ordered a potash mixture uniting diaphoretic, expectorant, and anodyne qualities. In a day or two, the patient being more restless, but otherwise apparently unchanged, the anodyne was increased. The affection continued mild until the morning of the 21st, when urgent symptoms of embarrassed breathing occurred, the respirations reaching 100 and the pulse 120 per minute (the ratio being 10 : 12). A crepitant râle was found in both lungs. A plaster of cantharidal cerate was applied to the front of the chest, limited above by the clavicles, below by the edge of the costal cartilages, and laterally by a line dropped from the anterior fold of each axilla. The following mixture was ordered:

℞ Potassii citratis, ℥ss;
Ext. digitalis fl.,
Ext. ipecac. fl., āā ♏v;
Ext. aconiti fl., gtt. iii;
Tinct. opii camphoratæ, ℥vi;
Ext. glycyrrhizæ fl., ℥j;
Syrupi,
Aquæ, āā ℥ss.

M. S.—A teaspoonful to be taken every two hours.

9 P.M.—The cerate has caused a satisfactory blister; the serum has been properly evacuated, and the surface dressed with a fomentation. The respirations have fallen off nearly one-fourth in point of frequency, the range being from 72 to 86 per minute, while the pulse remains as before.—122 (ratio, 7 : 12).

22d, 9 A.M.—Respirations vary from 72 to 66 per minute. The iodide and bicarbonate of potassium were added to the prescription for their higher alterative and reducing power upon the crasis of the blood, and syr. acaciæ substituted for the simple syrup.

January 23, 9 A.M.—Respiration 54; other symptoms unchanged. 5 P.M.—The pulse, while having about the same frequency as before (122), is much less strong. The patient clutches at the face and moans. The bowels are closed. To take the following:

℞ Elixir calisayæ,
Elixir ammonii valerianatis,
Spt. ætheris nitrosi, āā ℥j;
Ext. belladonnæ fl., gt. j;
Ext. scillæ fl., ♏v;
Ext. glycyrrhizæ fl., ℥i;
Ol. cajuputi, gt. j;
Syr. acaciæ, ℥j. M.

S.—A teaspoonful every two hours.

8 P.M.—The pulse is fuller and quicker,—132. The respirations have remounted to 70 (ratio, 7 : 13). Treatment continued.

January 24.—The patient has rested well, the fever passing away in the night. The cough and expectoration are easy, the urine abundant. Respiration 56; pulsations 120 (ratio, 5.6 : 12). To take, in addition to former remedies, a teaspoonful of aromatic syrup of rhubarb every four hours. 8 P.M.—The breathing is quicker; there is a troublesome, rather spasmodic cough and fever. The cantharidal plaster, already described, is to be divided vertically, and each half is to be applied beyond the edges of the surface already blistered so as to include the area defined by the outer edges of the scapulæ.

January 25, 8 A.M.—A good blister was obtained in three hours, which was dressed as before. There was some delirium after midnight. She is now resting well, with a pulse at 120 and respiration 50 (ratio, 5 : 12). She has had one movement of the bowels. The urine is scanty. Directed:

℞ Quiniæ sulph., gr. iv;
Pulv. ipecac.,
Pulv. opii, āā gr. jss;
Pulv. caffeæ Arab., gr. xii.

Mix, and divide into twelve powders, one to be taken every three hours, alternately with the mixture. 8 P.M.—Respiration 53, pulse 120. There have been two movements of the bowels, and a free ejection of mucus. The rhubarb syrup is to be discontinued.

January 26.—The patient was restless during the fore part of the night, but in the after part she slept well, having no fever. 6 P.M.—She is doing well.

January 27.—The patient's face is somewhat flushed; pulse 125, respiration not noted. She has had one alvine evacuation, slimy and offensive. In the place of the former powders she is to take the following:

℞ Quiniæ sulph., gr. ii;
Hydrargyri c. cretæ,
Pulv. ipecac.,
Pulv. opii, āā gr. j.

M. et ft. chart. no. viii.

S.—Let one be taken every four hours, alternating with the following mixture:

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℞ Spt. ætheris nitrosi,
Elixir calisayæ, āā ʒj;
Ext. belladonnæ fl., gt. j;
Ext. scillæ fl., gtt. viii;
Ext. glycyrrhizæ fl., ʒj;
Ol. cinnamomi, gt. j;
Syr. acaciæ, ʒv.—M.

Dose, a teaspoonful.

January 28.—The patient has rested well, coughing less. The face, while she sleeps, is flushed. Pulse 129; respiration not noted. The tongue is somewhat coated; there has been a gentle perspiration. The quinia is to be increased to a half-grain every four hours, the other medicine to remain unchanged. I also ordered the following:

℞ Iodini,
Ol. amygdalæ amaræ, āā gr. iii;
Ung. petrolei, ʒj.

Let the iodine be rubbed with the oil, and when reduced add the cosmoline.

S.—Apply externally.

4 P.M.—The patient has sweated considerably, and there has been a more natural evacuation of the bowels. The treatment is to be continued.

January 29.—The patient has a severe cough, but has slept well. The pulse is 118; the bowels regular and natural.

January 30, 9 A.M.—The patient has rested well, but the cough is rather violent and paroxysmal, approaching a whoop. The following was prescribed for the lung-indications, the myrrh in particular assisting in expelling the mucus from the bronchial tubes and giving tone to their lining membrane:

℞ Myrrhæ opt., gr. xvi;
Potassii iodidi, gr. iv;
Elixir ammonii valerianatis, ʒii;
Ext. belladonnæ fl., gtt. xii;
Ext. scillæ fl., ♏v;
Ext. glycyrrhizæ fl., ʒj;
Infus. caffeæ Arab., ʒjss.

Rub the salt with the myrrh and a very little of the infusion to a smooth paste, adding thereafter the remaining ingredients.

S.—A teaspoonful every four hours.

January 31.—There has been but one hard paroxysm of coughing attended by a whoop. The bladder is acting well, as also the bowels, the dejecta being, however, still slimy. The appetite is improving. She is to take one-fourth grain of quiniæ s. with one-half grain of powdered coffee every four hours.

February 8.—Although left as convalescent at the time of the last record, the patient has continued weak, a catarrhal condition of the bowels causing from eight to ten movements yesterday. I ordered the following:

℞ Bismuthi subcarb., ʒj;
Hydrarg. c. creta, gr. vj;
Ext. ipecac. fl., ♏x;
Tinct. opii, fʒj;
Glycerinæ, fʒiii;
Ol. cinnamomi, gtt. j;
Aq., ʒiiss. M.

Sig.—Give a half-teaspoonful every two hours, increasing the dose if necessary.

February 18.—The cough persists, and the bowels are irritable. Let the myrrh mixture be continued, the iodide of potassium being exchanged for chlorate of ammonia and elixir pepsin and bismuth for elixir valerianate of ammonia, the dose to be a teaspoonful three times a day. From this time convalescence steadily progressed to complete recovery.

Case II.—Walter T. H., 13 years of age, farmer's son, residing in Warren County, N. J., was taken with measles about April 18 last. He had a high fever and a tardy eruption. During the forenoon of Friday, April 20, he coughed almost incessantly; in the afternoon the cough subsided, but the fever increased and the respirations became very rapid. At 9.30 A.M. of the 21st they reached 60 per minute, varying but little from that figure during the day. No pain was complained of. At 9 P.M. of that day I saw him for the first. He lay upon his back, with his knees drawn up. There was a heaving impulse connected with the breathing, which was at the rate of 40 per minute; pulse 130 (ratio, 4:13). There was an abundant rash about the body and thighs; the temperature was a trifle over 104° Fahr.; there was a fine crepitant râle in the lower lobe of the right lung, and a few scattered coarse ones in the left; the skin was hot and dry, the tongue slightly coated, and the bowels were moving frequently. He was given immediately a powder composed of quinine, opium, and ipecac, and perspiration soon appeared upon the face and forehead. A blistering plaster of a hand's-breadth was ordered to be placed upon the front of the chest, to reach from scapula to scapula and to conform below to the free edge of the ribs and costal cartilages. This was applied at 1 A.M. April 22, and was constantly moistened with tinct. camphoræ. At 11.30 A.M. it was removed, having been applied ten and one-half hours. Beneath the loosened cuticle a small amount of serum had collected, which was evacuated, and a poultice of bread-crumb and warm water was applied as a dressing, the heat and moisture being retained by a covering of flannel and oil-cloth. The respiration had now fallen to 28, and the pulse to 120 (ratio less than 3:12). The crepitation was greatly lessened. 3 P.M., respiration 24, pulse 84; 7 P.M., the fever has returned, the skin being very hot, and the pulse marking 125. He coughs and raises some mucus. The quinia, the dose of which had been lessened on the recession of the fever, was now more freely used, and he soon commenced to perspire as on the evening before, and rested well during the night. 23d, 7 A.M., respiration 36, pulse 100, skin moist. Quinine, opium, and ipecac continued as at first. 24th. He is coughing considerably, and there is a crepitant râle of great intensity in the whole upper part of the right lung very loud and dry

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in front. The blistering plaster was so placed as to cover the whole of the affected side of the chest not already blistered, the posterior limit being the outer edge of the scapula. 10.30 P.M., removed the plaster and dressed with bread poultice as before. 25th, 8 A.M., a sibilant râle has taken the place of the crepitant râle, being heard all through the right side of the chest; the left side is natural. There is some oppression beneath the upper end of the sternum, a cough, which is dry and husky in the extreme, and a whispering voice. He was ordered inhalation of moist air from lime slaking in a large amount of hot water. 6 P.M., one grain of calomel was ordered in connection with the fore-mentioned powders every four hours, with a view to its constitutional effect, and incidentally to open the bowels. This last soon occurring, it was omitted for a short time, when it was resumed in a lessened dose. A teaspoonful of a syrup containing six grains of myrrh and some anodynes was made to alternate every four hours with the powders. 26th, 6 A.M., pulse 96; 9 A.M, 106; 10.30 A.M., 118; the sibilant râle is less distinct, but the voice and cough remain very husky. The bread poultice, which has been used uninterruptedly as a dressing to the chest, was now exchanged for ung. hydrargyri, at first pure, but afterwards liberally diluted with lard. During the 27th, 28th, and 29th there was general improvement except in the hoarseness. On the 30th, the patient was left in care of the attending physician. May 12th. Since taking leave of the patient I have been constantly informed of the progress of his convalescence. Extreme hoarseness continued for three weeks, and even now his voice has scarcely regained its accustomed clearness. Occasionally he coughs and expectorates. He is gaining, but is yet weak. The hoarseness seemed scarcely to indicate a laryngitis, it being supported by no other symptom. It was probably due to swelling and stiffness of the vocal cords. No remedies were used for its relief except a pectoral for the cough and a mustard-plaster about the throat.

I wish to call especial attention to the application of blisters in this disease, as therein lies, I believe, a chief source of success in the treatment. The fear that, if applied early in the attack, they may exasperate the inflammation, I have found, by often-repeated experience, to be groundless; nor has the objection of sympathizing parents to blistering the skin of tender infants any better foundation, as I have witnessed only good results even in the youngest. They should be fearlessly applied and made to cover the entire affected part, following out the line of the thorax when one or both lungs are affected. A blister that does not fulfil this requisite, or that is inefficiently managed, will fail of a beneficial issue. A piece of heavy domestic muslin, of the proper size and shape, should be sent to the druggist to be spread with cantharidal cerate, or the material be procured and a plaster prepared and applied by the physician. The cantharidal collodion may be substituted in special cases, but the cerate has proved more efficacious in my hands.

IMPETIGO CONTAGIOSA: ITS CLINICAL FEATURES.

BY HENRY W. STELWAGON, M.D.,

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IN a period of three years and a half, out of a total of twenty-seven hundred consecutive cases of skin disease, eighty-eight have been examples of the disease known as impetigo contagiosa. The cases have been, as a rule, of a uniform type, although occasional deviations in regard to the character of the lesion, distribution, and course were met with. The affection as commonly observed is well illustrated by the following case:

Case I.—R. A., male, aged 3. On face were several scattered flat vesicles and vesico-pustules and bullæ, varying in size from a pinhead to a dime, the larger ones showing a tendency to umbilication and already beginning to dry in the centre into a thin crust. The contents of the lesions were in some purely vesicular, in others vesico-pustular, all becoming vesico-pustular sooner or later. The lesions were superficial in character, surrounded by a narrow red band, and but slightly inflammatory. One of the bullæ had already dried, and appeared as a small crusted patch, the crust being thin, granular, yellowish, and wafer-like. The eruption had existed three days and had been preceded by slight malaise, and had begun as little "water-blisters," which rapidly enlarged. At the present time the child was apparently in perfect health, and there seemed to be no subjective symptoms. A brother had the same disease, as also had several children in the same neighborhood. In a few days new patches were seen on the face, one or two in the scalp, and several on the hands. The enveloping membrane of one of the new pea-sized bullæ had been rubbed off, and the surface appeared like a shallow erosion or burn, secreting a thin sero-purulent fluid. The older bullæ were drying rapidly; two or three had become confluent, making

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a patch as large as a silver half-dollar, covered with the same peculiar crust as already noted. When seen two days later, the more recent vesicles had grown into bullæ, flat, umbilicated, and beginning to dry. One small vesicle had appeared on the conjunctiva of the left eye, causing slight hyperæmia and a trifling sero-purulent discharge. The confluent patch and the older bullæ were covered with a dry, yellowish and brownish-yellow, thin, granular, wafer-like crust, somewhat turned up at the edges, only slightly adherent, and appearing as if imperfectly pasted on. Several new vesicles had appeared, but showed less tendency to enlarge. One or two had been rubbed, and seemed like superficial abrasions. Forty-eight hours later all the bullæ had given place to simple crusted patches of the character already described. At the margin of the oldest patches the crust had begun to crumble off. Two days afterwards, the disease was fast disappearing; the crust of the discrete patches, with few exceptions, had entirely fallen off, leaving erythematous spots. On some of the patches a few small fragments were still clinging. At the end of a few days nothing was seen of the disease except the erythematous spots showing the site of the eruption; these gradually faded. The disease had run its course in about two weeks.

This case pictures the typical disease. At times the eruption is confined to the face, as occurred in fifteen of my cases. In others, in addition to the face the scalp shows some patches, or the disease may begin on the scalp. In others, again, the hands and arms, and not infrequently the legs and feet, are affected. The mucous membranes of the eye and nose are sometimes the seat of vesicles. Beginning usually on the face, it may extend to all parts: the trunk seems the least vulnerable. Ordinarily the eruption is seated upon the face and hands. On the extensor surface of the fingers, near or around the nail, is a favorite locality for the eruption when attacking the hands. Occurring here, it closely simulates a burn, and the lesion is, moreover, apt to be more persistent.

The disease was occasionally ushered in by fever and malaise, which subsided as soon as the eruption appeared. The submaxillary glands were in a few instances observed to be enlarged. In most of the cases, however, constitutional symptoms were entirely absent, or so slight as to escape notice. The disease is usually unattended with any subjective symptoms. Occasionally the eruption is a little itchy in the beginning; but even this is an exception. The eruption, when occurring in children with a tendency to eczema, may, if improperly treated or irritated, develop into that disease. This occurred in three of my cases, in which the primary eruption was unquestionably contagious impetigo. The lesions are superficial, and begin as vesicles, rapidly becoming vesico-pustular, enlarge by extension at the periphery into bullæ, varying in size from a split pea up to a dime or greater; at the same time the centre dries, and, in comparison with the surrounding bullous wall, seems depressed. The enveloping membrane is thin. There is no tendency to spontaneous rupture. In some cases the lesions become markedly pustular and have inflammatory borders. The eruption never leaves a scar, nor even a trace, except erythematous spots, which, however, quickly fade away. At times the lesions show very little tendency to enlarge, and then closely resemble varicella. Cracks, fissures, or abrasions are very soon the seat of the characteristic vesico-pustules and bullæ.

The disease was observed entirely among dispensary patients,—among the poorest class of dispensary patients, in fact. It can and does occur, however, among people well-to-do. In almost all of the cases the subjects were children; in only three instances was the eruption observed in adults, and in these it occurred in an abortive form, or was limited to two or three patches about the hands and face, and had been, moreover, contracted from younger members of the family. With but few exceptions, the children in whom the disease was observed were under ten years of age, and two-thirds of these under five.

The characteristic color of the crust—the straw-yellow—was often seen, but a brownish tinge, at times quite decided, was more common, depending probably upon the presence of dust and dirt.

Deviations from the typical disease were occasionally seen. The lesion itself may be somewhat anomalous in character, as the following case illustrates:

Case II.—M. A., male, aged 5. On the face were a few scattered vesico-pustules, about the size of a split pea, flat, and showing but little tendency to enlarge, and having inflammatory borders. On the arms were lesions of the same character. All were slightly umbilicated, and as the centre dried, and became thereby more and more depressed, the elevation of the surrounding bullous wall became comparatively more marked. The contents

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had become milky, and later decidedly purulent, so that the lesion was not unlike a large "pock." Crusting gradually took place, yellow and brownish in color, being thicker and darker at the periphery, and with a persistent inflammatory areola. New lesions appeared from time to time, and presented the same characters. One or two typical patches were seen on the face.

Such cases, although not frequent, are not uncommon, and, when occurring, are much more inclined to be chronic and to repeated outbreaks than the typical disease. Moreover, in cases showing this character the eruption seems to have a predilection for the arms and legs, a few characteristic patches being usually seen about the face. In some instances a few such lesions were seen in cases in which the eruption in the main was typical. The eruption differs from that commonly seen in the more marked umbilication, prominence of the peripheral bullous wall, the thicker and darker crust, the inflammatory areola, the slow maturation, and, finally, in the tendency to repeated outbreaks.

At times cases are seen in which the bullæ, instead of being flat and umbilicated, are somewhat distended, and resemble very closely the eruption of pemphigus, as in the following case:

Case III.—C. R., female, aged 7. On face and forearm were several well-marked bullæ, with very little areola, and showing different degrees of distention, in some the contents tolerably clear, and in others milky. Several small vesico-pustules were scattered over the face, and a large, characteristic, crusted patch was seen on the nose. The eruption had begun as small blisters, and developed rapidly into blebs. Two children in the same family had the disease, but the eruption presented nothing unusual. Later the bullæ flattened and gradually dried, forming a thicker crust than ordinarily seen. Several new vesico-pustules and bullæ appeared, and finally the disease yielded to treatment.

Cases in which this peculiarity, the more or less distended bleb, occurs, are comparatively rare. More often one or two such lesions will be seen in patients otherwise showing the common form of the eruption. If the bleb is ruptured, the enveloping membrane sinks and becomes blended with the sero-purulent secreting base, and dries into a yellowish or brownish-yellow crust, which in time falls off, leaving an erythematous spot, which gradually fades. If the bleb-wall is rubbed off, the underlying surface appears as a simple discharging shallow ulceration or burn. When no rupture takes place, the bleb gradually sinks and dries, forming a crust somewhat thick, and resembling the crust of ecthyma, except that it is not so dark. In some instances, especially when the lesion has an inflammatory border, the resemblance at the maturing stage of the lesion to ecthyma is quite striking. This is never seen in all the lesions: one or two may exhibit this character and the rest of the eruption be characteristic. These, then, are the modifications of the lesion commonly observed and exemplified in some of my cases.

In the distribution of the eruption anomalies were noted. The first case narrated in this paper gives that usually observed,—the face, scalp, hands, and arms; it may extend to the legs and feet. In typical cases of the disease the eruption never spares the face: beginning here, it may extend to all parts, but commonly to the scalp, hands, and forearms. Deviation from this may, I think, be properly considered as irregular. The most common one met with is that in which the eruption is seated mainly on the limbs. In the cases under my care the limitation of the eruption to these parts was noted in six instances; in a number of others, although there were a few patches elsewhere, the limbs were the parts chiefly attacked. The characters of the eruption were about the same, except that the lesions were scattered, and consequently there was no tendency to the formation of confluent patches. One or two of the bullæ may be somewhat distended and dry into tolerably thick crusts. Indeed, the eruption may assume any of the characters as observed in the cases already noted.

The eruption may occasionally begin on the hands or other parts. In one case the eruption began on the knee, and subsequently the hands were affected, but no other part became involved; at the end of two weeks the disease had run its course. In another instance the eruption began on the buttocks, and subsequently appeared on the face and hands. In several cases the eruption first showed itself on the hands, and then extended to the face and other parts,—spontaneously or by auto-inoculation.

The course of the disease, as may be inferred from the histories of the cases quoted, varies. In my cases the average

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was about twenty days. Other observers have noted about the same average duration. In some instances the eruption was prolonged to several months. Even if let alone, the affection is apt to be self-limited, but not always so; for in some cases, and in spite of treatment, new lesions continue to appear, and the affection persists for two or three months. It does not lose its contagious properties, however, as I have clinically and experimentally observed. Cases in which the limbs are chiefly involved seem to be most disposed to chronicity. The following case is an example:

Case IV.—R. M., male, aged 9. One characteristic crusted patch on face, several small flat vesico-pustules on the hands and arms, which later developed into small flat and slightly-umbilicated bullæ with sero-purulent contents. Subsequently several appeared on the legs. Old patches crusted and disappeared. One of the flat bullæ had inflammatory borders, and the contents were markedly purulent, and dried into a thick brownish-yellow crust. New lesions continued to appear on the limbs, going through the same phases as the typical lesion. One or two appeared on the left ear, dried and crusted rapidly. In this manner the disease continued for two months, and then gradually disappeared. In this time two other children in the family were attacked, in whom, however, the disease ran a shorter and more typical course.

In their main features my cases have agreed more or less closely with those described by other writers, both in this country and abroad. All observations go to prove that, although the affection is a comparatively simple one, and the eruption usually typical, it at times presents irregular and anomalous characters.

Recapitulating, we have a contagious, auto-inoculable eruption of a vesico-pustular type, superficial in character and but slightly inflammatory, occasionally preceded by slight fever, the lesions varying in size from a pin-head to a dime or larger, always beginning as small vesicles or vesico-pustules, and enlarging by extension of the peripheral wall, with a thin enveloping membrane and a tendency to umbilication, and no inclination to rupture; drying into a thin, granular, wafer-like crust, appearing as if stuck on; seated usually on the face and hands, not infrequently on the scalp and limbs, and rarely on the trunk; tending towards spontaneous disappearance in about fifteen days; at times new lesions appearing, and the disease persisting several weeks or even months; having no influence upon the general health, and usually unaccompanied with any subjective symptoms; and observed mainly in children under ten years of age.

NOTES ON THE TREATMENT OF EPILEPSY.

BY W. THORNTON PARKER, M.D.,
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WITHOUT attempting to add anything new to the well-filled literature of epilepsy, it has occurred to me that the following cases may be of interest to the profession, if not instructive. In the first place, it is desirable to bear in mind the recognized causes of this disease. In a large proportion of cases it undoubtedly has its origin in hereditary transmission.

Bartholow,* in defining the causes of epilepsy, says, "It is a neuropathic constitution or tendency which is inherited, and this exhibits itself in various forms in different generations." In seeking for the cause of epilepsy, especially in young people, one of the first sources investigated is the character of the parents. Have the father or mother, or even the grandparents, been addicted to the use of intoxicating liquors to excess? Have either of the parents been sufferers from malarial poisoning, rheumatism, neuralgia, consumption, or insanity? The object and direction of these inquiries are easily understood: it is to discover what has seriously depressed the soundness of the nervous system or has a tendency to impoverish the general health of the body, or of both body and brain.

The cause of epilepsy is not so frequently, as supposed, to be found in hereditary transmission of the results of blows upon or injuries to the head, as it is in weakened and diseased parents, or in parents whose nervous systems have been severely injured by excesses in dissipation, or weakened by extraordinary sorrow or nervous shock. Epilepsy is more likely to be common among the poor and those who are unable to care properly for themselves or to provide for their offspring.

Imagine a family living in poorly-ventilated rooms, drinking water contaminated by exposure to foul atmosphere, subsisting

* Bartholow, Practice of Medicine, 2d edition, 1881, p. 596.

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on insufficient food, existing in the midst of dirt and wretchedness, unhappy, unclean mortals, whose children grow up neglected, ill treated, frightened. In such surroundings do we find plenty of cases of epilepsy. The cause, then, seems to consist, in many cases, in malnutrition, or in severe injury or shock to the nervous systems in one or other of the parents or grandparents. It is true, however, that epilepsy can be handed down, and undoubtedly is in many cases, from parents to children; but altogether the majority of epileptic cases originate from other causes. For some years a family of several adult epileptics lived near one of our fashionable summer resorts: these people seemed to have received the disease from their parents by hereditary transmission. They lived and died town-paupers, and, so far as I know, seemed to derive no benefit from many physicians and very much medicine. They were always in need, however, of suitable food and proper care, and, in my opinion, for their own good and comfort and for the health of the community would have fared better at one of our well-regulated insane asylums.

The proportion of cases of epilepsy which can be successfully treated is so large that I consider it of great importance to understand how very hopeful the prognosis of certain forms of this disease may become if taken early in life and managed according to the plans hereinafter to be proposed. The trouble has been heretofore that almost every drug in the dispensatory has been used in vain, and that even rare drugs and minerals have been sought for and employed without much success, and the means close at hand forgotten and ignored. Epilepsy is a disease which especially demands of the practitioner an immense amount of patience and perseverance. The disease is not to be combated and defeated by intricate prescriptions or magical potions, but by persistent attention to the laws of health, to success in nutritive efforts, to overcome as far as possible morbid action in every detail. To take the sufferer from the scene of his former sufferings, and to instil in his mind hope in spite of recurring failures,—to overcome despair, which is quickly recognized by the patients, in so many of his attendants and acquaintances,—all this is undoubtedly attempted by many practitioners; but it is true, nevertheless, that many more seem to battle with this disease by the aid of drugs alone, and apparently in a hopeless manner at the outset. We have in the treatment of epilepsy much to encourage us in the hope for a successful issue. A large proportion of our patients, whether rich or poor, have been improperly cared for from infancy. They need fresh air, they need healthy homes, good food, cleanliness, cheerful society,—in fact, a decided change in the ways of living and reasoning; they will bear tonics, and in a large proportion of cases, if properly treated, will get well in a reasonable time. There are to be met with daily, on the other hand, cases neglected, too old for successful treatment, degraded, imbecile creatures,—in fact, some so hopelessly ill and so beastly in habits that death would seem to be for them and for their friends an angel of mercy. This class is not quite so numerous as formerly, and soon we shall hear of more and more success in the treatment of this loathsome disease. Many of the symptoms attributed to epilepsy are those which owe their origin to cerebral anæmia, or rather, we would say, general chronic anæmia: the whole body is diseased from lack of nourishment, the mind is distorted, depraved, and wretched in the extreme. The mind is undoubtedly affected in a large majority of cases, and this would be, considering its nervous origin and character, the condition naturally to be looked for; but, in spite of the severity of the disease upon the nervous centres, very many epileptics have possessed more than ordinarily strong minds! It is impossible, however, to associate a really healthy body or mind with a serious form of epilepsy. The health of the body and the stability of the mind must sooner or later give way under the terrible strain of this disease.

The cases to which I will invite attention were all young, from seventeen to twenty-three years of age, and of course presented the most hopeful prognosis. It is on this account highly desirable to commence treatment before the habit has become too firmly fixed and before the body is too deeply impressed and injured by this exhausting malady.

Case I.—Edward B., American, 17 years old; family history unknown, but father suspected of immoderate sexual excesses and drinking. Has sometimes two or three attacks of epilepsy in one day. Decidedly morbid appetite. Full lips, robust, bright, active boy,

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well reared. Countenance pallid. Commenced treatment by clipping the hair, ordering cold bathing of head twice daily, also sponge-baths daily.

℞ Wyeth's ferri dialysatum, gtt. xii, five times daily. Milk, oat-meal, cracked wheat, Indian meal, eggs, potatoes, onions, lettuce, beef-juice, bread and butter, for diet.

To have at bedtime two teaspoonfuls of the following mixture:

℞ Brom. potass.,
Brom. sod., āā ʒss;
Syrup. simpl., ʒss;
Aquæ ad ʒvi. M.

This treatment had the addition occasionally of Wyeth's vinum cibe et ferri cum cinchona, half an ounce three times daily. Bread-and-milk was to be taken between meals, and before going to bed at night. No history of masturbation or other bad habits. Immediately after the attacks, and, if possible, when symptoms suggested an appearance of coming seizure, the dose of the bromides was doubled, and taken four or five times in twenty-four hours, but generally not so often. This patient soon began to improve, mentally and physically, and remained some years free from attacks, until he was at last lost sight of.

Case II.—M. C., young woman of 19. Parents Irish, supposed to be respectable; can find out no history of drunkenness in either father or mother. The children of the family are all anæmic and poorly nourished, living in a very uncomfortable and unhealthy manner. The patient has never been very strong, and is addicted to masturbation. Has had epilepsy several years, and suffers mostly about the time of the monthly sickness. Shortly before coming under treatment had four attacks in one day. Was ordered to have hair cut, to bathe the head morning and evening, allowing cold water to pour freely over the top of the head, to take sponge-baths, abstain from eating meat, and to take Wyeth's dialyzed iron, twelve drops five times daily, also the solution of bromide of potassium and sodium mentioned previously, and in the same doses, at intervals, the beef, wine, and iron with cinchona. This case improved steadily under treatment, and was free from attacks of epilepsy, with two exceptions, for three years. After that the case was lost sight of, but her whole condition had decidedly improved. Several similar cases could be mentioned; but these two are samples of the treatment used with apparently great success.

Dr. Boyé's* conclusions are that the bromides of sodium and ammonium have an immediate effect on the epileptic seizures, that they are much better borne than the potassium bromide, and that no disorder of the digestive organs occurs except the dose be very large.

The basis of the treatment of epilepsy in his institution (Sainte-Anne) consists in the administration of the bromides of sodium and ammonium, with oxide of zinc, and belladonna. The formula for the bromides is the following:

℞ Ammon. bromidi,
Sodii bromidi, aa gr. 160;
Aquæ, ʒj. M.

Cathartics seem to be very generally employed at Sainte-Anne, but in my own experience I am inclined to think their exhibition in general highly injurious. There is a preparation, however, which *is* very desirable for the treatment of the constipation so common in epilepsy,—Brewer's effervescing tartrate of soda, a very elegant, convenient, and pleasant preparation, which almost always proves satisfactory where something else than enemas is required.

"Whenever epilepsy occurs in weak and anæmic subjects, iron is indicated. Cases of this disease, essential in character and dependant on cerebral anæmia, are sometimes cured by iron alone."† After witnessing patients discolored with nitrate of silver and dosed nearly to death with every conceivable "remedy," the treatment herein suggested seems simple enough, but it will be found in many cases at least to yield the most gratifying results: at least this has been my experience, and I sincerely hope may be the experience of others also.

FORT ELLIOT, TEXAS, April, 1883.

SOME PRACTICAL POINTS IN THE USE OF MYDRIATICS.

BY EDWARD JACKSON, A.M., M.D.,
West Chester, Pennsylvania.

THE following cases are worthy of note simply because they are not unusual. They illustrate the neglect of certain principles of therapeutics, well enough understood, but too often forgotten.

A. C. H., 12 years old, came under observation with headache, pain in the eyes, and dimness of vision. Her condition of refraction was hypermetropia, in the right eye 1.75, and in the left 2.75, dioptrics. Her eyes had begun to trouble her while at boarding-school, two months before. She had "belladonna dropped in them once a day for a week," according to her statement. She also said that "it made everything very misty," but she kept on with

* The Treatment of Epilepsy, Medical News, March 31, 1883.

† Bartholow, Materia Medica, 4th edit., 1882, p. 123.

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her studies. In a few days she could not see to read, and, her eyes becoming more painful, she went home, and had remained out of school ever since.

I. B., aged 17, was reported to have had violent ophthalmia in early childhood. Of late, for some months, she has been suffering with aching in the the eyes and forehead. A week since, she saw her family physician about it. He said her eyes were probably at fault, and that she had best have them attended to. He then gave her medicine that would relieve her headache. While taking the medicine the pupils became fully dilated and the accommodation partially paralyzed, but the headache was no better. Her state of refraction was: right eye, H. 1.75+Ah. 0.75; left, Ah. 5, dioptrics.

Each of these patients was relieved by the instillation, for a few days, of a one-half-per-cent. solution of daturia sulphate, with the subsequent use of correcting glasses.

The beneficial influence of mydriatics in cases of eye-strain is well enough understood, and needs no further proving. It was well illustrated in the later treatment of these cases: why was it not manifested at the earlier applications?

The influence of a mydriatic over the eye to which it has been applied may be either complete or incomplete. When complete, the pupil, expanded to its widest limits, remains unchanged under all conditions of light, convergence of visual axes, etc. The iris no longer responds to the various impulses which it has been accustomed to obey: in the sense that its condition is constant and unchanged by stimuli, it is perfectly at rest. At the same time, the muscular agent of accommodation no longer responds to the circumstances and influences that usually affect it. In like sense, it also is at rest.

If the influence of the mydriatic be incomplete, very different conditions are present. The pupil is partially dilated, and the accommodation weaker than normal. But the pupil still contracts on exposure to a brighter light or when the visual axes are converged, and dilates as the axes become more nearly parallel or the light dimmer,—the influence of the mydriatic being shown merely in the fact that the pupil does not contract so much as it would normally under the same stimulus. The same is true of the muscle of accommodation. It is thrown into action by effort of the will, by convergence of the visual axes, by the constant involuntary effort to obtain clear retinal images, yet it acts less powerfully than when in the normal condition. If the eye be partially under the influence of a mydriatic, a less effect is produced by a given stimulus, or a greater stimulus is required to produce a given effect.

Now, the pathological starting-point of the class of cases to which these patients belonged is excessive exertion of the accommodative mechanism, and the first indication for their treatment is to put an end to such excessive exertion. If the influence of the mydriatic be completely powerful, this is fully accomplished. If it be incomplete, the indication is not met, for the iris and ciliary muscle, though weakened, still respond to each accustomed stimulus, and the eye-strain is increased rather than removed; and such was certainly the case with A. C. H., going on with her studies in spite of the further weakening of a previously-overtaxed muscle.

It is not necessary to consider, here, any specifically antiphlogistic influence which a mydriatic may exert over the ocular tissues with which it comes in contact. In these cases of eye-strain such influence must be of secondary importance, and powerless for good, until the cause of trouble has been removed by securing to the eye complete mydriatic rest.

The foregoing physiological and pathological facts bear upon these practical points:

First, when a mydriatic is used for the relief of eye-strain, it must be so applied as to secure completeness of its physiological action upon the eye.

Second, the periods of incomplete mydriatic influence, which necessarily precede and succeed the period of complete mydriatic rest, should be as short as possible, and during their continuance the eye should be carefully guarded from those influences that excite to action the iris and ciliary muscle.

In connection with the first point, it is to be borne in mind that full dilatation of the pupil is not that completeness of physiological action that is desired. For instance, in my own eye I can, by using a solution of a certain strength, secure full dilatation of the pupil, although one-half the normal power of accommodation remains. Again, it is in general impracticable to secure the desired completeness of action by introducing the drug through

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the general system. Attempts to do this must, as in I. B.'s case, prove unsatisfactory or injurious.

In the second point is to be found the superiority of hyoscyamia, duboisia, and daturia over the more commonly used atropia.

NOTES OF HOSPITAL PRACTICE.

UNIVERSITY HOSPITAL.

CLINIC OF JOHN ASHHURST, JR., M.D., PROFESSOR OF CLINICAL SURGERY IN THE UNIVERSITY OF PENNSYLVANIA.

Reported by LOUIS J. LAUTENBACH, M.D.

FRACTURE OF THE THIGH ABOVE THE MIDDLE, UNDER TREATMENT.

CASES of fractured thigh are always of interest, both during the course of treatment and at the time of the accident. To-day we have a man about 33 years of age, who has been under treatment for five weeks. The fracture was above the middle of the femur, and was, as is usually the case in adults, not a transverse but an oblique fracture. We have had him in bed constantly since the accident, and in two or three weeks more, probably, we will permit him to get up.

Of course we have here a certain amount of shortening. I believe that we never succeed in adults in curing a fracture of the thigh without shortening. In all my own cases, as well as in such cases in the hands of other surgeons as I have had an opportunity of examining, there has invariably been present shortening in a greater or less degree. In this case (by measuring from the anterior superior spinous process of the ilium to the internal malleolus in either leg) we find that there is a shortening of fully an inch. This is a fair average result. Had this man not been such a very restless patient, I am confident that the amount of shortening would have been considerably less. It is almost impossible, however, to cure a case of fracture of the thigh in an adult with less than half an inch shortening. In a child the case is different: the fracture then is usually transverse, and does not allow shortening to the same degree that an oblique fracture does. Besides this, the fracture itself may stimulate growth by irritation transmitted to the epiphyseal cartilages, and thus, after union, the bone may be for a time actually longer than the one on the opposite side. I have been in the habit of illustrating to students the union of broken bones by comparing the process to the fastening together of two pieces of sealing-wax. To do this it is necessary to melt the ends, and this is accomplished at the expense of the sealing-wax. The contiguous surfaces of bone undergo retrograde metamorphosis into granulation-tissue, and in this process there must be some slight absorption and consequent shortening. If the fracture is oblique, as it usually is in adults, there is of course probability of greater shortening, from the overlapping of the fragments.

In this case the time for extension and perfect immobility of the limb (the mode of treatment we have been pursuing in this case) has expired. We may now put on a plaster-of-Paris bandage, or some other light dressing, simply to support the parts and to prevent any risk of refracture. We will use here pasteboard splints, —binders' board dipped into hot water and given a proper shape. We will apply a bandage first from the toes up to the groin, and then, having padded the splints (which need not go below the knee) with cotton, hold them in place with another bandage outside. The fracture is firm enough for us to apply this dressing, although the patient must stay in bed for a few weeks longer. If allowed to get up at this time, the shortening of his limb might be considerably increased. In these cases, when the patient is allowed to walk prematurely, consecutive shortening occurs, the two surfaces of the fractured bone sliding on each other somewhat like the tubes in a telescope. This gives a very disappointing result, and is one to be guarded against. The patient and his friends are apt to think that as soon as he can support his weight on the injured limb he is cured and can walk with safety. This is, however, not the case: it takes a good while for the bone to become firm enough to bear the weight of the limb without giving rise to deformity.

We will apply one pasteboard splint to the inner and another to the outer aspect of the thigh, placing considerable padding under them. Over the splints we will use the ordinary roller-bandage, applied more firmly than would be justifiable if the splints were not well padded.

This dressing is not as firm as the plaster-of-Paris bandage, but has the advan-

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tage of being lighter. If, however, the patient could only be seen at long intervals, the plaster dressing would be the best, as it could be left on for several weeks without renewal.

We will still keep the cradle over the limb, to prevent discomfort from the weight of the bed-clothes resting on the toes, but we will leave off the extension. We will allow the patient now to turn around in bed. There is very slight, if any, angular deformity; there is no eversion of the foot; altogether the result is a good one, although there is an inch of shortening.

TALIPES EQUINUS—OPERATION.

Our next case is one of club-foot in a boy about 14 years of age. It is not a case of varus, which is the most common form of club-foot, but it is a contraction of the tendo Achillis and of the plantar fascia, constituting the condition known as talipes equinus. It has received this name from the analogy of the horse's hoof to the toes, upon which, with the ball of the foot, the patient walks in these cases.

Sometimes in connection with the contraction of the tendo Achillis there is well-marked contraction of the plantar fascia. We have a case in the house now where the contraction was so great that it was necessary to divide this fascia in three or four places.

We will here operate on the plantar fascia first, and, after this is done, will divide the tendo Achillis. We will then apply a plaster-of-Paris bandage, keeping the foot in good position, and in a week or ten days will dispense with this and use the simple "frame-shoe," provided with steel side-supports and pads.

The best mode of treating club-foot, where the circumstances are such as to allow it, is to divide the tendons and not to attempt restoration of the foot until union has occurred, when extension is to be made very gradually. This is, I think, undoubtedly the best mode of treatment when we have the opportunity of practising it. But to apply the shoe and practise extension we cannot trust the parents or the nurse. The surgeon must apply the shoe every day himself, putting the heel well down into its place. I have found by experience that where the application of the shoe had to be intrusted to the nurse or the parents, this mode of treatment is not satisfactory. I have seen cases of varus where, although the mechanism of the shoe has been carefully explained to the parents, the child has been taken home only to return after several months or years, with no improvement in its condition. The reason is that the shoe has never been properly applied, the heel has never been brought down into its place, and in consequence the entire mechanism of the shoe has been below the foot. Of course the apparatus, under these conditions, is of no value whatever.

It is therefore better, as a rule, to divide the tendons, put the foot at once into its proper position, fix it in this position for some time, and afterwards apply the shoe.

To divide the fascia, I am in the habit of using a very small, delicate knife, even more delicate than a tenotome,—the knife recommended by Mr. Adams, of London, for his operation for the relief of Dupuytren's finger-contraction. This knife has a flat edge, the curve being only on the back. In dividing the fascia, we will cut it from above. Enter the knife flatwise between the skin and the fascia, turn the handle so that the cutting edge will present downward, and cut in the same direction. Divide all constricting bands of the fascia. Cover the opening with lint saturated in compound tincture of benzoin, and hold this in place by adhesive strips. Now divide the tendo Achillis by introducing the knife below the tendon, turning the edge upward and cutting toward the skin. Having done this, we will see if we can bring the foot beyond the right angle, which is the test to tell whether there has been sufficient division of the tendons. Cover this puncture too with a pad soaked in the compound tincture of benzoin, and take care that the strips of adhesive plaster are so applied as to make no circular constriction.

Now we want a little cotton to lay over the malleoli, and we will then apply a flannel roller, followed by a roller containing dry plaster of Paris in its meshes, which has been dipped in water. This is strengthened by the use of dry plaster rubbed over the bandage. The foot must be held in the proper position until the plaster has set,—probably from fifteen to twenty minutes.

If necessary, the patient could now go home at once, but it is better for him to remain in the hospital for a few days, as

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the foot is apt to be painful when moved, from the puncture, as well as from the forcible extension which has been practised. After he has worn this bandage for ten or twelve days it will be removed, and he will be fitted with a simple frame shoe.

GUMMATOUS TUMOR OF LOWER EXTREMITY OF THE FEMUR, WITH SYPHILITIC ORCHITIS.

The next patient that we have to-day is one with an enlargement of the lower extremity of the thigh-bone. He came to the hospital with this enlargement some four weeks ago. He had a clear syphilitic history. When he came, the lower part of the thigh, as well as the knee, was enormously swollen. The swelling is now much less. There is no effusion into the knee-joint. This is easily determined by examining the patella to see whether or not it floats above or rests upon the condyles of the femur. Tapping it gently, we find that it is in contact with the condyles. It shows that the swelling is outside of the joint: it is an extra-articular swelling.

He has also an enlargement of the testicle, not the late form of syphilitic orchitis, due to the deposit of gummatous material, but the earlier form, known as interstitial syphilitic orchitis, an inflammatory condition which is often followed by great shrinking of the part. When we see a swelling of the body of the testicle, which is painless and hard, without any history of injury, we may always suspect a syphilitic origin. The tuberculous sarcocele, which is the only variety likely to be mistaken for this, does not go on long without suppuration and the formation of sinuses. There is no special treatment to be adopted in cases of syphilitic orchitis, which this undoubtedly is, except the use of the ordinary constitutional remedies. Under these alone the swelling has already diminished somewhat in size, and undoubtedly will become much smaller if the treatment is persisted in.

The treatment which we adopted for the joint-affection was the use of a posterior splint to keep the parts fixed and at rest, and the use of the ointment of belladonna and mercury, with counter-irritation by means of tincture of iodine, applied, not over the joint itself, but above and below it. Under this treatment he has been very much improved, and now I think it will be safe to apply firmer pressure and allow him to get up. We will accomplish this by means of the plaster-of-Paris bandage. We will first pad the joint well with cotton wadding, and then put on the flannel roller, fixing the joint by carrying the roller from below the middle of the leg to above the middle of the thigh. After this roller is applied we will use the plaster roller, finishing the dressing as usual by rubbing a little dry plaster outside. When the swelling goes down it will be necessary to take this bandage off and reapply it.

EPITHELIOMA OF THE CHEEK OCCUPYING THE POSITION OF A MOLE.

This old man comes here with a morbid growth of the cheek. He has a history of having had a mole for years, and within a year this has ulcerated and begun to enlarge. It is an instance of a morbid growth, at first of a non-malignant character, assuming a malignant action and epitheliomatous development. The anatomical characteristics of these cases are those of epithelioma, but if the growths are thoroughly removed the disease is not apt to return. They are favorable cases for operation. The late Mr. Collis, an eminent Irish surgeon, even went so far as to say that if epithelioma of the lip was properly removed, it would never recur. I am not prepared to go as far as this, but at least in the great majority of cases you may rest assured that, if the operation is *early* and *thorough*, the cure will be permanent. Here there is very little thickening, and the growth is quite superficial, so that there is no difficulty in its complete extirpation.

Operations in this part of the face are apt to involve some of the branches of the facial nerve. We have here made the incisions transversely, so as to run as nearly parallel as possible to the general direction of the nerve-branches. If these are wounded, in a few days the patient will notice some slight paralysis of the face, which will, however, usually disappear in the course of six or eight weeks, so that no permanent harm is done. We will bring the edges of the wound together by one or two pins, and will also use interrupted sutures. After the points of the pins are cut off and their ends protected by means of a strip, we will dress the wound with lint soaked in equal parts of glycerin and water. This is a clean application for use about the face, and the glycerin has the advantage that, by its property of absorbing moisture from the air, it keeps the dressing from becoming dry.

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Our patient has other moles, situated on the face and forehead, but, as none of these have assumed a malignant character, we will let them alone.

TRANSLATIONS.

THE CHLORHYDRATE OF KAIRIN AS AN ANTIPYRETIC.—It is to Prof. Filehne, of Erlangen, that the profession owes this new antipyretic, the proper name of which, according to M. Hallopeau, is the methylhydrate of oxyquinoline. It is, like quinine, a derivative of quinoline. The chlorhydrate is a crystalline, grayish-yellow powder. In the ordinary dose of twenty-five grains (1.50 G.) it does not exert any appreciable physiological effect in a healthy person, but in fever patients it lowers the temperature, the fall being proportionately more rapid with the increase of the dose. In order that this antipyretic action may be maintained, it is necessary to continue the remedy in gramme doses (gr. xv) every two hours or so. If this is not done, the fever returns rapidly and often is attended by a chill. The urine, while this agent is employed, becomes of a dark-green color. The remedy is well tolerated, and, according to M. Hallopeau, its good effects are shown in all febrile maladies. The original introducer of the drug employed it in typhoid, acute rheumatism, septicæmia, tuberculosis, and acute pneumonia. It is claimed, indeed, that with its aid pneumonia may be made to go through its entire course without fever. Having given the agent in similar cases, M. Hallopeau endorses the recommendations of Prof. Filehne with regard to the antithermic action of kairin, and declares that "of all the antipyretic agents it is the one, in non-toxic doses, the most sure, the most powerful, and the most rapid." It will enable us to avoid the dangers which hyper-pyrexia brings in its train, and is therefore a valuable medicament, "une ressource précieuse pour la thérapeutique" (*Revue de Thérapeutique Médico-Chirurgicale*, No. 10, 1883.) From a series of trials made by Drasche in pneumonia, erysipelas of the face, phthisis, and a bad case of typhus, reported to the Royal Society of Physicians in Vienna, substantially the same conclusions were reached, and kairin was pronounced the most prompt and efficient of all antipyretics.—*Centralblatt für Chirurgie*, No. 28.

[Unfortunately, its high cost, at present, will be likely to limit its usefulness.—ED.]

TREPHINING FOR TRAUMATIC RUPTURE OF THE MIDDLE MENINGEAL ARTERY.—At the meeting of the Zurich Medical Society (*Korrespondenzblatt für Schweizer Aerzte*, 1883, No. 1), Dr. Kronlein reported two interesting cases: A man 48 years of age fell and struck his head against a step. After half an hour he regained consciousness and walked into his house. He seemed perfectly conscious until midnight, when he went to sleep; but in the morning he was found again unconscious: he was then taken to the hospital. When admitted, he was in a state of sopor, without paralysis. The next day there was paresis of the right leg, complete paralysis of the right arm and face, with ptosis. As the symptoms pointed to meningeal hemorrhage, the reporter trephined the skull over the trunk of the middle meningeal artery, but he found it intact and did not find any extravasation. At the autopsy a large effusion was discovered, however, which had depressed the underlying brain-substance, and which came from a posterior branch of the same vessel. The second case was a man 60 years of age, who was brought into the clinic unconscious and hemiplegic. He was in a deep sopor, and the left side was powerless. As his condition at the end of a week had become worse, the operation of trephining was performed at the location indicated by Vogt over the middle meningeal artery. A large extravasation was at once encountered and removed, separating the dura mater from the skull for about an inch and a half. The clot removed was about 140 to 150 Gm. The wound had entirely healed at the end of four weeks, and the patient recovered with only a slight facial paralysis.—*Centralblatt für Chirurgie*, No. 28.

MUSCARIN-POISONING SIMULATING CHOLERA.—In a brief communication Prof. Boehm, of Marburg, calls attention to exfoliation of the epithelium of the bowel as the result of poisoning, which, with the attendant diarrhœa, might be mistaken for an attack of cholera. He states that there are two forms of poisoning in which the epithelium is cast off from a large part of the intestinal mucous membrane and is dis-

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charged with the dejecta,—acute arsenical poisoning, and intoxication with several members of the mushroom family. The former has been already brought to the notice of the profession; the latter is of recent discovery by him, and has not been previously published.

The animals experimented upon were cats. Muscarin being administered by subcutaneous injection, "choleriform symptoms appeared: violent vomiting and purging, which at first was fæcal; afterwards white masses of mucus were discharged by the anus, containing partly isolated epithelial cells, and partly membraniform casts shaped like a glove-finger." These appearances are worthy of note in a community in which mushrooms enter into the daily food, and in which a cholera epidemic is threatened.—*Virchow's Archiv*, June, 1883.

PHYSIOLOGICAL ACTION OF ADONIS VERNALIS.—From a careful physiological and clinical study of the effects of Adonis vernalis, Dr. Bubnoff arrives at these conclusions:

1. The active principle of Adonis vernalis excites the inhibitory nerves of the heart at the central end.

2. Its further action is to paralyze the peripheric end of the vagus.

3. It likewise excites the accelerating system of the heart, sometimes directly (through the blood-pressure), sometimes indirectly.

4. Up to the moment at which paralysis of the vagus occurs, the two systems of cardiac innervation interfere.

5. At the termination of the toxic effect, paralysis of the motor nervous apparatus of the heart apparently occurs.

6. After death there is either complete loss of excitability of the cardiac muscle or it is very much weakened.

In man, this agent caused more gastro-intestinal disorder (vomiting and diarrhœa) than digitalis ordinarily does, and in certain individuals the effect upon the central termination of the vagus was more marked than from digitalis; and in one series of cases with disordered compensation of the blood-circulation, after digitalis had failed, the Adonis was given with decidedly good results.—*Deutsches Archiv für Klin. Med.*, June, 1883.

DIRECT COMMUNICATION IN THE LIVER BETWEEN THE BRANCHES OF THE PORTAL AND HEPATIC VEINS.—Sabourin finds in the substance of the liver, along the course of the larger divisions of the portal vein, some branches of the hepatic vein which lie in the periportal connective tissue, and, although direct communication between the portal and hepatic veins has not been actually demonstrated by microscopical sections, he is convinced that such actually exists, an opinion to which he was first led by his pathological studies. Claude Bernard also held this view, upon the physiological postulate that the capillaries are not competent to conduct the large amount of fluid carried to the liver during digestion, the greater proportion of which then would flow directly through these large communicating branches from the portal vein into the hepatic. In the intervals of digestion the blood is prevented from passing through these vessels by a sphincter-like arrangement of muscular fibres and connective tissue, the exact character of which further experiments will be needed to determine.—*Progrès Médical*, No. 8.

DIABETES AS A SYMPTOM OF INTRACRANIAL DISEASE.—A child four and a half years old, previously healthy, had for nine months experienced constant thirst and increased excretion of urine without nervous phenomena, but the patient lost flesh and became gradually weaker. At this time the symptoms of tubercular meningitis developed, and she died after a fortnight's stay in the hospital. The quantity of urine was very great: on one day it was nearly ten litres.

At the autopsy, besides a tubercular meningitis, there was particularly observed a caseous tubercle of the infundibulum and a spot of softening in the corpus striatum, with distention of the lateral and fourth ventricles.

CURIOUS MALFORMATION OF THE HEART.—In the *Progrès Médical* (No. 23) is described and figured a case of congenital malformation of the heart by Dr. Gilbert, of Havre, in which there was a prolongation, like the finger of a glove, of the left ventricle, through a deficiency of the anterior portion of the diaphragm, into the abdominal cavity, and so as actually to form a part of an umbilical hernia. The child died of pneumonia at ten months. The specimens were presented at a meeting of the Société de Biologie.

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PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, SEPTEMBER 22, 1883.

EDITORIAL.

MEDICAL EDUCATION.

EVER since the *Philadelphia Medical Times* has been under its present editorial management it has systematically and with all boldness exposed the iniquities of the American system of medical education, and has pointed out the sole thorough remedy,—namely, the taking from the colleges the right to grant licenses to practise. So long as men can make thousands of dollars yearly by the sale of diplomas and hide their crime under the cloak of teaching, so long will the consciences of many be numb and without feeling. In spite of all that has been said, it is still considered respectable to hold these positions, and men yet come from distant places to take them. There are, it is true, symptoms that the day is approaching when honorable men will be found to decline connection even with money-making doctor-factories, but the approach is with woful slowness.

Public opinion has already done something, and may do more, in controlling medical education; but the evil can only be rooted out by separating teaching and licensing,—by requiring every new M.D. who desires to enter practice to pass an examination before an official licensing board which should not only have no direct connection with teaching, but also have no teacher among its members.

The world moves. We have seen the cause of proper medical education gain enormous headway during the last few years, but we had no idea that the millennium was approaching so rapidly as it seems to be from a recent editorial in the *New York Medical Record*, where it is affirmed that there can be but little doubt that the Legislature of the State of New York will before long give serious consideration to the matter of creating a State Examining Board as a sole licensing body. We agree with the *Record* that the success of any law will depend upon its details. The chief difficulties to be met are in regard to the appointment of examiners, and the relations of the homœopathic practitioners. The appointments must be kept out of politics. This can readily be achieved by giving the appointing power to the State Medical Society. Whether we like it or not, it is sure that if success is to be achieved the existence of homœopathy must be recognized in the formation of the Board. Possibly two Examining Boards, one appointed by the Homœopathic State Association and one by the State Medical Society, might be allowed; possibly the subject of therapeutics might be dropped out entirely; possibly it would be best to have a Board homogeneous and uniform in all respects save only in regard to therapeutics, which subject should be represented by two or three individuals.

The time will come when the earnest discussion of these details will be a pressing duty; but at present all that we can do in this State is to hurry along the tide of public opinion, which is now drifting towards the measures that have been adopted in all civilized portions of the world save the United States.

THE CONCLUDING VOLUME OF AGNEW'S SURGERY.—We have already noticed in detail in the review pages of our journal the appearance of the first two volumes of this gigantic work. It is now with great pleasure that we congratulate Prof. Agnew on the completion of the whole,—a life-work, which is a great contribution to the written experience of those who toil that human suffering may grow less and less.

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TROUBLE.

JUST now the homœopathic fraternity are to a more or less wide extent sorely exercised by the discovery of one of their number, Dr. J. Edwards Smith, that the sugar of milk, universally employed as an inert vehicle in the making of triturations, is as universally impure. In the language of the homœopathic leader,—

"The first effect upon the mind which an unquestionable proof that *all sugar of milk*, wherever bought, contains at least enough silica, alumina, and iron to constitute itself the sixth decimal potency of these drugs, if it have received the requisite amount of trituration, is a fact which seems stupendous when we reflect that many of the polycrests may only be prepared by trituration, while the process has been adapted to many other drugs. The matter is not benefited apparently by the fact placed on record by Dr. Conrad Wesselhoeft, that the glass of bottles, such as we use for preserving dilutions, is to a very appreciable extent soluble both in water and in 95 per cent. alcohol. We see at once that whenever we have prescribed an attenuation of any remedy we have in reality administered two or more drugs; and, furthermore, with reference to silica, alumina, and iron, we have never given either of them in a potency higher than the sixth decimal, if we measure potency by dilution rather than by dynamization."

Verily, with the discoveries of modern science becoming more and more brilliant, the way of the honest, sincere homœopath is growing hard; but then the race of honest, sincere homœopaths who toil along this pathway, rugged and stony with its absurdities and its contradictions, is almost extinct. It is the by-path of pretence and fraud whose rough places are being trodden smooth by so many feet eager to barter self-respect for gold.

LEADING ARTICLES.

HOANG-NAN.

THERE is at Tonkin a plant of the genus Strychnos, the bark of which possesses very astonishing therapeutic virtues, if all that is said about it be true. This plant, or rather climber, is called in the Annamite language hoàng-nàn. We are indebted to Mr. Romanet du Chailland, of the Geographical Society of Paris, for our knowledge of the very curious therapeutic properties of this plant.

It is said that the knowledge of the medical virtues of the hoàng-nàn was formerly the secret of an indigenous family. The family having abjured their religion for Christianity, its chief did not hesitate to reveal this secret to the missionary who had instructed them in the Christian religion. It was thus that the abbot Lesserteur, to-day governor of the foreign missions in Paris, formerly missionary himself at Tonkin, acquired a knowledge of the existence of that Strychnos and of its virtues, concerning which he wrote a work to which Mr. Romanet du Chailland refers.

The hoàng-nàn, according to these authors, cures hydrophobia. Mr. Lesserteur mentions two cases of declared madness which have been cured at Tonkin by the application of that remedy. One of these cases has been certified to him by a missionary named Perrier, established in the country for about twenty years. This missionary cured a young girl of fourteen years old, of the village of Xuan-Yen, at the height of the disease. Mr. Perrier gave to her three large pills (more than a drachm), and some moments after two others containing about forty-five grains. The patient fell as thunderstruck, then entered into lethargy, and was soon cured.

When the madness is fully declared, as in the case above, it is necessary, according to the abbot Lesserteur, to act with energy. The patient swallows, with the aid of a tablespoonful of vinegar, at first two or three pills, after these several others at short intervals, until twitchings of the feet and hands and contraction of the jaw-muscles are felt.

On account of giving water as a vehicle of the remedy, the experiment performed, it is said, with the hoàng-nàn in one of the hospitals of Paris had no favorable result. The operator wished then to employ hypodermical injections, but the quantity brought to him was not sufficient, and while a stronger dose was looked for the patient died. Mr. Romanet du Chailland declares that the remedy is now being studied at the school of Alfort, and that the savant, Mr. Pasteur, had promised to experiment with it.

In Algeria three missionaries of the congregation of Africa, bitten by a mad dog, have been cured by this substance. But this is not the only property of the hoàng-nàn. They say that this strychnia is an excellent antidote to snake-poison. Studies on this subject would be of a great interest.

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Finally, the hoàng-nàn is asserted to have been used with success at Pondicherry, in the West Indies, and in Venezuela, to combat leprosy. It is also said that it is powerful for scrofulous and venereal diseases.

F. EMERY.

August 27, 1883.

NOTES FROM SPECIAL CORRESPONDENTS.

CHICAGO.

THE summer just now passing away has been the most remarkable for many years. Certainly nothing like such a continuously low temperature during June, July, and August has been experienced for more than a decade, and yet the health of the city has been as exceptionally good.

We are having a needed addition to our hospital accommodations in the new hospital building now in process of construction upon the block adjoining Rush Medical College. The building is to be about seventy-six by one hundred and forty-seven feet, four stories and a basement, of brick, with stone trimmings. When completed, this hospital is to be under the college board, and will be directed in the interests of Rush, thus giving the school a special advantage over all competitors in this part of the country.

Professional and social circles are just how agitated over a scandal involving the good name of one of the leading, and until within a few weeks most highly respected, physicians in this community. Dr. H. W. J. resided in the west division, had a palatial residence, a very extensive obstetric practice, a princely income, and an enviable social position. The doctor is past fifty, good-looking, is finely educated, and has an exceptionally pleasing address. His wife is a lady possessing like accomplishments. About two years ago Dr. J. gave some passing professional attention to a very handsome society woman, by whom he became fascinated. It now appears the woman was a sort of adventuress, and the doctor, being ignorant as to the ways of her kind, yielded to the unhealthy influence, was fascinated and powerless under the charm of her beauty and many accomplishments, and in less than two years he surrendered everything, loving wife, good name, fortune, and with the wife of another man has gone away forever. The profession of the city is deeply stirred, because Dr. J. is the last man to have been suspected of any such action.

The investigation into the lard frauds came to a farcical conclusion: the scientific experts gave the most conflicting testimony, even contradicting themselves. Dr. R. stated that samples "A" and "B" were composed of lard and tallow, whereas they were pure lard. Professors Curtis, Long, and Walter Lee Brown were in like manner embarrassed. The fees paid experts varied from five hundred to three thousand dollars each.

It is rumored that Dr. Roller is about to retire from the chair of Obstetrics in Chicago Medical College, his health having become much impaired.

September 10, 1883.

PROCEEDINGS OF SOCIETIES.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

STATED MEETING, THURSDAY, September 6, 1883.

The PRESIDENT, R. A. CLEEMANN, M.D., in the chair.

DR. WM. T. TAYLOR read the report of a case of

FACE-PRESENTATION WITH ECLAMPSIA.

Face-presentations are somewhat rare. Dr. Churchill, some years ago, in recording the statistics, found that in British practice they occurred once in two hundred and ninety-two cases, in French practice once in two hundred and seventy-five, and in German practice once in one hundred and thirty cases. In my own practice I have met with about one dozen; and, as the last one was combined with eclampsia, I will report it to the Society.

During utero-gestation my patient enjoyed very good health, having no headache, no swollen limbs or bloated features, no vertigo or dimness of vision. There was no deficiency of urine, and therefore I did not examine it for albumen. Her appetite was fair, her bowels regular, and she took a moderate degree of exercise: so that I had no reason to expect any trouble when labor began.

On May 14, 1883, I was summoned at 6 A.M. to visit Mrs. C. H., aged 23 years, primipara, who was in the first stage of labor, having had a show since midnight. On examination, I found the os very slightly dilated, with the pains "few and far between," and the face of the child presenting, with the chin towards the sacrum. The nurse informed me that the patient had not slept during the night and was very nervous and irritable. Her skin was moist, her pulse normal, and she had urinated frequently.

I gave her a mixture containing hydrate of chloral, bromide of potassium, and valerianate of ammonia, to compose her, and went home for my breakfast, intending to return in a few hours.

At eight o'clock the husband came to my office and told me that his wife had "had a fit and could not keep the medicine down." I arrived at the house at 8.30 A.M., and sent

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immediately for some powdered hydrate of chloral and an injection-apparatus. The patient had had two convulsions, which were ushered in by complainings of her head, her face being very red and her head drawn to one side, with the features much distorted. The first convulsion occurred when the nurse was about to give the first dose of the medicine. Directly after my arrival a third convulsion occurred, and lasted for a minute or more, her head being violently drawn to the right side, with jerking of her arms and legs.

I dissolved one drachm of the hydrate of chloral in about four ounces of water, and threw it into the rectum. The fit yielded immediately. As she was unconscious, I had an excellent opportunity of examining her. The os was dilated to the size of a quarter-dollar, and soft, so that it yielded gradually to the pressure of my fingers, when I discovered the face-presentation, with the chin towards the left sacro-iliac junction. I endeavored to push the chin towards the breast, so as to bring down the occiput in the second position of Baudelocque. This I found somewhat difficult, but as the os dilated under the pressure of my fingers I reached the occiput, and after several attempts succeeded in bringing it down to a favorable position, the one aforesaid. My patient by this time was becoming restless and uncontrollable, and, fearing another convulsion, I again gave her an injection of chloral, which quieted her. Having placed her on her back and brought her to the edge of the bed, her limbs being supported by the nurse and a neighbor woman, the forceps were easily applied, and the head brought down below the inferior strait. I removed the instruments, when the head pressed against the perineum, allowing nature to finish the delivery. The child, a boy, was still, the cord being pulseless. In fact, I was apprised of this whilst endeavoring to dilate the os with my fingers, for a significant tremor had passed through the body of the child, assuring me of its death. The placenta was removed quite easily.

During all this time my patient was unconscious, and had no return of convulsion from the time I gave her the first injection of chloral.

As her pulse was good and her respiration easy, I applied a binder, and, having placed her in a comfortable position, left her sleeping. On my return at five P.M. she was restless and slightly feverish, but after taking a few doses of chloral and valerian she was quieted to sleep. On the next morning, May 15, she was perfectly conscious,—pulse 80, temperature 99°, and respiration normal. She had urinated freely, and, with the exception of some slight soreness over the abdomen, was very comfortable. She inquired for the babe, knowing from her condition that it had been born, but the preceding twenty-four hours were to her a perfect blank. From this time she had no further trouble, and soon recovered. This case certainly showed the beneficial effect of injections of hydrate of chloral in controlling puerperal convulsions where they are of a nervous form.

Dr. ALBERT H. SMITH remarked that face-presentations and puerperal convulsions presented a large field for discussion. Dr. Taylor was very fortunate to be able to bring down the occiput and keep it so until the forceps could be applied. In this operation a man needs three hands,—one to hold the head while the others manipulate the instrument. The mechanism of a primary face-presentation, as reported in this case, is difficult to understand. It may occur secondarily from obliquity of the uterus and a sudden, free gush of waters, causing a rapid engagement of the head before flexion could be secured. In such cases it is very difficult to secure and maintain flexion until the forceps can be applied. In the majority of cases of face-presentation, even with the chin posterior, nature is best able to terminate the case satisfactorily. It is to this class that the aphorism "meddlesome midwifery is bad" is most applicable. The natural forces work slowly, and the neck of the child becomes accustomed to the extreme extension which it has to undergo; while it is very bad to bring, by means of the forceps or otherwise, a sudden strain on the vertebræ and other tissues of the neck by too rapid forcing of the chin into violent extension. The consequence of the hasty proceeding is a still-born child. The only ground for interference is an alarming condition of the child's pulse. If the child's heart is beginning to fail, we must take the risk and give it the benefit of the chance. The child's head cannot be born in face-presentation until the chin has engaged under the pubis. The old teaching was that the chin posterior could not be born, but he was very early undeceived on this point, one of his earliest cases having been of this character. He had sent for his preceptor to come and bring perforating instruments, but while awaiting their arrival nature proved equal to the task, rotation occurred spontaneously, and a living child was born.

Dr. B. F. BAER inquired if version by the feet would not be much preferable to waiting for nature to deliver in chin-posterior positions.

Dr. SMITH did not mean that we should never interfere in a case of this kind, but that a large majority, if left to nature, would terminate spontaneously by anterior rotation of the chin, with safety to both mother and child. He would decidedly negative the proposition of version by the feet, because, the amniotic sac having been necessarily ruptured by previous efforts to bring down the vertex, the waters would have been completely evacuated, the uterus would be in a condition of spasmodic contraction, and an at-

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This unsatisfactory state of things has convinced us of the necessity of preparing our own scaled salts, and we have, accordingly, made full provision, and can now furnish this preparation, for which we give the following guarantee:

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tempt to turn would involve great danger of rupture of the uterus. The introduction of the hand always increases the risk of septic absorption, two terrible risks against the mother, while the child is exposed to all the dangers of head-last delivery. He should consider chin-posterior presentations natural labors, and should allow them to terminate spontaneously unless there was some complication demanding version.

Dr. J. G. ALLEN coincided with Dr. Smith in his conservative principles. The risks of version to the mother are great,—too great to allow it to be performed for the sake of the child. The operation of version is not looked upon in as serious a light as it should be under all circumstances. In some instances it may be very easy and may terminate well, but in others, apparently similar in conditions, the results to the mothers are bad. He would not lose one mother to save ten children. He would never resort to version unless the labor were impossible under other measures. Even after it is skilfully performed, the child is often still. The increased risk to the mother is followed by no corresponding gain in safety to the child.

Dr. R. P. HARRIS thinks the ideas of Dr. Smith are the same as held by most eminent obstetricians, and agrees with their practice as expressed to him in private correspondence.

Dr. BAER was willing to be taught. The views expressed this evening did not harmonize with the teaching of even the present day in Philadelphia. He had been taught that version would be proper if the case was diagnosticated early and the operation could be performed before the waters were evacuated, and it seemed to him that the rational thing under such circumstances would be to turn. It was entirely a new light to him to consider chin-posterior cases as easy natural labors. He had been taught to look upon them as impossible, and that rotation never took place, the forces in action not being great enough to compel it. His own recent experience had led him to doubt this dictum: with one blade of the forceps used as a vectis, he had without difficulty secured anterior rotation. His idea of the impossibility of rotation under the circumstances made him doubt the correctness of his diagnosis of the position, but the principles put forth this evening reassured him. May the death of the child, causing relaxation, be the cause of the face-presentation?

Dr. ALLEN does not expect others to accept his opinion, but in his denunciation of turning he alludes to the complete transposition of one extremity of the fœtal ellipse for the other, and does not include the changing of one part of the head for another; but in the first class the poor chance of saving the child will not compensate for the increased danger to the mother.

Dr. SMITH does not consider chin-posterior an easy natural labor. On the contrary, it is the most difficult of natural labors. The chin strikes upon the posterior inclined planes and is rotated to an anterior position, in which it engages under the arch of the pubis exactly as the vertex would. In multiparæ nature is able to accomplish this result, but in primiparæ assistance in rotation may be required and even traction may become necessary. In contrasting the dangers incident to version by the feet and those involved in trusting to nature in this condition, when the waters have been discharged, as they necessarily have, in the attempts to bring down the vertex, which will be first tried, we must remember that the child will be tightly grasped by the uterus, and that it must be twisted upon its long axis as well as turned to bring the nape of the neck under the arch of the pubis, and that this procedure will greatly enhance the danger to both mother and child.

Dr. TAYLOR, in closing the discussion, remarked that the death of the child occurred after it was fully engaged, and was not a factor in causing the face-presentation. When he made his diagnosis of position the head was high up, and, the child being small, he had no difficulty in bringing down the vertex.

W. H. H. GITHENS, M.D.,
Secretary.

REVIEWS AND BOOK NOTICES.

ON THE MORBID CONDITIONS OF THE URINE DEPENDENT UPON DERANGEMENTS OF DIGESTION. By CHARLES HENRY RALFE, M.A., M.D., Fellow of the Royal College of Physicians, London, etc. 12mo, pp. 148. London, J. & A. Churchill, 1882.

This little book has long been upon our table, but its notice has not been deferred because of any distrust of its merits, in which it is far richer than many more pretentious works. Its title of "Morbid Urines" is scarcely correct, for we would rather term it Derangements of Digestion and Nutrition in which Morbid Conditions of the Urine are a Symptom. They include acid dyspepsia, flatulent dyspepsia, derangements associated with deposits of uric acid, with oxalic acid, and with excessive elimination of phosphoric acid. The book opens with a chapter on the formation and removal of acid from the body, and an appendix on the effect of bicarbonate of potash on the acidity of the urine.

The questions arising are discussed from a chemical stand-point, and the therapeutics suggested, full of practical value, are largely based on sound chemical reasoning. It would seem as though the mantle of Bence Jones is likely to fall upon Dr. Ralfe, and that it will be worn as gracefully by him as by his illus-

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trious predecessor. Indeed, it is not unlikely that the more accurate chemical pathology and therapeutics will rest upon a sounder basis and lead to more satisfactory practical results than heretofore.

We commend Dr. Ralfe's little book to the close study of the profession, and are confident that all who read it will feel that it has been profitable to do so in more ways than one. J. T.

A Practical Treatise on the Medical and Surgical Uses of Electricity. By George M. Beard, M.D., and A. D. Rockwell, M.D. Fourth Edition. Revised by A. D. Rockwell, M.D. William Wood & Co., New York, 1883.

The death of Dr. George M. Beard has thrown the revision of this work into the hands of his colleague, who has in all respects maintained the peculiarities and the reputation of the work. The most important addition to the present edition is the chapter on the electrical treatment of extra-uterine pregnancy; the subject of franklinic electricity is also considered in detail. Dr. Rockwell certainly brings forward enough evidence to necessitate the making of an attempt to destroy the fœtus by galvanism in every case of extra-uterine pregnancy in which the positive diagnosis is made out sufficiently early.

Types of Insanity. An Illustrated Guide in the Physical Diagnosis of Mental Diseases. By Allan McLane Hamilton, M.D. New York, William Wood & Co., 1883.

This quarto consists of ten plates, with their explanation, and about thirty-six pages of text. The plates are apparently lithographs, which are said to have been taken from instantaneous photographs. Some of them are recognizable as portraying forms of mental disorders; others of them have to our eyes no significance. None of them compare in any way—except as bad art compares with good—with the famous engraving by Kaulbach of a mad-house yard.

Most of the text bears very little relation to the illustrations. It is arranged in five chapters, as follows: I. General appearance, physiognomy, posture, etc., of the insane; II. Conditions of special organs; III. Conditions of bodily functions; IV. Examinations of patients, of handwriting, etc.; V. The commitment of the insane, and abstracts of the laws in the various States. To us the last chapter is the most valuable of the book; although the physician who has had little experience may pick up here and there in other portions of the text observations and suggestions to him novel and interesting.

Hand-Book of Electro-Therapeutics. By Dr. Wm. Erb. Translated by L. Puzel, M.D. New York, Wm. Wood & Co., 1883. 8vo, pp. 366. The June issue of Wood's Medical Library. A handsomely-printed edition of a standard work, with thirty-nine wood-cuts.

GLEANINGS FROM EXCHANGES.

A Case of Progressive Total Hemiatrophia.—Dr. Henschen, of Upsala, relates in a recent number of the *Nordiskt Medicinisk Arkiv* a case which is almost unique in medical literature,—presenting, as it does, a series of atrophic changes of half of the body, in the skin and subcutaneous tissue, as well as in the muscles, bones, and joints, principally in the face, the left arm, the left leg, and partly the left half of the trunk. The patient is still living, and therefore the pathological changes cannot be defined with any accuracy; but the appearances of the body, which are represented in a plate accompanying the paper, are very striking, showing an extreme degree of emaciation of the left arm and leg, and an appearance of the face almost identical with that seen in progressive facial hemiatrophia. The cranium above the eyebrows is nearly symmetrical, but on the plane below them the face exhibits a most marked asymmetry, the left half being considerably smaller than the right. The nose is, as it were, pushed towards the left; the left cheek is deeply sunken, destitute of fat, and surrounded with deep radiating wrinkles; the eye is very much sunken, but otherwise healthy; the eyelids deprived of their fat; the left zygomatic arch atrophied, as well as the soft parts surrounding this bony process. The skin and the lips of the left side are very thin; the upper and lower maxillary bones of this side are much atrophied. The teeth have been shed; the alveolar process of the left upper maxillary bone is wanting behind the second molar tooth, and the raphé of the palate is drawn to the left. All the right side of the face is healthy, with abundant fat. The neck is symmetrical. All the left half of the trunk is rather smaller than the right, but, with this exception, it is nearly alike, though some of the parts are atrophied. Over these atrophied parts the skin is as thin as paper, and the subcutaneous fat is almost entirely wanting, so that the muscular fibres form evident projections on the skin. The left arm and leg are remarkably atrophied, the fat being almost completely absent, the skin very thin, the muscles wasted, the joints altered in character, and some of the bones united together,—as, for instance, the tibia and fibula,—and the tibio-tarsal joint is anchylosed. The tactile sensibility of the atrophied parts is not remarkably altered, except that the left leg is more sensitive than the right, being more easily affected by cold, and perhaps also by electric irritation. The patient, who is now forty-six years old, was healthy up to the age of fourteen, when he suffered from a slight sprain of the left ankle-joint, and shortly afterwards he had an erysipelatous inflammation of the left leg. Since that time he suffered from pricking and shooting in the

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left half of the body, and at the end of three months some changes appeared in the extremities and the trunk, and, six months later, in the face. At this time he suffered from severe attacks of headache. At nineteen years of age he had melancholia, but he recovered, and now enjoys good health. He married at the age of forty, and had a healthy and well-formed child. All the changes above described first appeared, therefore, a short time after a sprain of the left ankle-joint. They have continued since that period, and the morbid process went on ascending to the central nervous system, the anatomico-pathological process being at present unknown, as well as the course which it has followed in the nervous centres.—*Medical Times and Gazette.*

MOLLUSCUM CONTAGIOSUM GIGANTEUM.—Under this name Dr. S. Laache, of the Anatomico-Pathological Institute of Christiania, describes, in a recent number of the *Nordiskt Mediciniskt Arkiv*, a tumor extirpated from the nape of the neck of a female, aged 56. This tumor, which had lasted for thirty years, but had increased considerably for the last four years, was of the size of the fist, with nodulations or unequal protuberances on the surface; it was covered at its base with normal skin, sending tongue-like ramifications over the whole tumor, and which were transformed at last into a delicate membrane, half pellicular and half granular, covering the whole mass except at the summit, where there was a flat crateriform depression. Under this incomplete covering there was the mass of the tumor, which, as it were, undulated against the surface. The cut surface, equally composed of nuclei of unequal size, separated by septa of cellular tissue, presented a granular aspect, but without the knife being covered with adipose matters. Examined by the microscope, the lobules contained, in the circumference, cellules evidently resembling epidermis, while in the centre were seen a considerable quantity of corpuscles with an adipose or waxy lustre strongly resembling amyloid tissue. In all other respects they resembled the corpuscles of molluscum, with which the author compared them. In his remarks on the case, Dr. Laache discusses the differential diagnosis between molluscum and epithelioma or cancroid, to which last the tumor was at first referred. From cancroid, however, the molluscum in question was distinguished by its definite form and its tendency to grow outwards, besides by its being covered entirely by a kind of delicate skin without any apparent ulceration. It was, however, the presence in considerable quantity of corpuscles of molluscum which determined the diagnosis. The author admits, however, that, as regards prognosis, the tumor could not be regarded as being so benignant as ordinary molluscum, and he therefore thinks he ought to consider it as a transitional form between the malignant epithelial tumor and the benignant one. He observes that there was no relapse at the end of more than six months. In conclusion, Dr. Laache considers the presence of nuclei in several of the shining corpuscles as a proof in favor of the opinion that the corpuscles of molluscum are the results of a peculiar degeneration of pre-existent epidermic cellules. —*Medical Times and Gazette.*

VERSION.—Dr. Grosholz reported to the British Medical Association a series of fifty cases of version without a maternal death. The infant mortality from all causes was 1 in 2½, but taking only those fairly attributable to the operation it was only 1 in 3½. Regarding the causes necessitating operation, he stated that as turning is generally understood to mean a restoration of a child to its normal position in the uterus, or the substitution of some other portion of the body for that originally presenting, it will not seem surprising that the operation was performed for the rectification of some malposition of the fœtus in thirty-eight out of the fifty cases. Of the remaining twelve, five were cases of placenta prævia, four of contraction of the pelvis, and three of uterine inertia. We thus see that thirty-eight, or about four-fifths, of the cases in which the operation was performed were cases of *malpresentation* of the fœtus, four of *malformation* of the mother, five of *malposition* of the placenta, and three of failure of the uterine contractions. To go a little more into detail, he has tabulated the above facts as follows:

Malpresentation .	Shoulder . .	18	38
	Arm and funis	8	
	Arm	6	
	Face and hand	3	
	Brow . . .	1	
	Brow and hand	1	
	Back . . .	1	
Pelvic contraction			4
Placenta prævia			5
Uterine inertia			3
			50

In performing the operation he prefers the bimanual method, by combined internal and external manipulation, to introducing the whole hand into the uterus. He recommends turning with the left hand, the patient lying upon her left side. He found it decidedly advantageous to bring down only one foot or knee, instead of both, and advised the use of chloroform for its relaxing effect upon the uterus, thus in a measure preventing lacerations. The operation should be performed, if possible, before the membranes are ruptured: in a case of placenta prævia he introduced his hand to one side in preference to penetrating its substance.—*Lancet*, August 11, 1883.

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PROFESSOR ERB ON THE ETIOLOGY OF TABES DORSALIS.—In 1881, Professor Erb published his first series of 100 cases of tabes dorsalis, showing the frequency of previous syphilis in this disease. In 88 of these cases there had been previous syphilis, in 12 there had been none. Since that date, Fournier, in his work on "Locomotor Ataxia of Syphilitic Origin" (1882), gives the percentage of cases in which there had been previous syphilis as 93; Vogt, a former opponent of syphilitic tabes, in his latest statistics, gives the percentage as 81.4. The *Berliner Klinische Wochenschrift*, No. 32 of this year, contains a paper by Erb giving a second series of 100 cases of tabes dorsalis. Out of this series, 9 only of the cases had had no syphilis, while 91 had had previous syphilis. Of these 91 cases, 62 had undoubted secondary syphilis, 29 had primary sores, but no secondary symptoms were noticed. Of these 29 cases, 5 had true hard sores, 10 were treated with mercury and iodide of potassium, and in 14 the treatment and the nature of the sore are not noted. The tabes dorsalis manifested itself at the following periods after infection with syphilis: 13 cases occurred between the first and fifth years, 31 between the sixth and tenth, 25 between the eleventh and fifteenth, 15 between the sixteenth and twentieth, 5 between the twenty-first and twenty-fifth, 1 between the twenty-sixth and thirtieth, and in 1 case the period was unknown. Thus, 69 of the 91 cases occurred during the first fifteen years after infection, 15 in the period between fifteen and twenty years, and 6 still later. As a check observation Professor Erb ascertained that of 1500 patients who attended his clinic, who were not tabetic, 77.25 per cent. had never had syphilis, and that 22.75 per cent. had been infected. Of these latter, 10.25 had suffered from secondary symptoms, and 12.50 from chancres only. From these observations he concludes that syphilis is such an important factor in the etiology of tabes dorsalis that scarcely any one who has not had syphilis or a chancre has a chance of becoming tabetic. As to the other factors in the etiology of tabes (viz., heredity, catching cold, fatigue, sexual excesses, and injury), he considers them of much less importance: of the 100 cases of the present series he gives in 36 cases syphilis as the only assignable cause, in 17 cases syphilis and cold, in 8 syphilis and fatigue, in 7 syphilis and excesses, in 2 syphilis and injury, in 15 syphilis, cold, and fatigue, in 4 syphilis, cold, and excesses, in 3 syphilis, fatigue, and excesses, in 1 syphilis, excesses, and injury as the assignable causes, and in 3 cases cold alone, in 2 cases fatigue alone, in 1 case excesses alone, and in 1 injury alone. Syphilis is thus the most frequent and important change of condition that favors the development of tabes, the other factors generally acting in company with syphilis.

The frequent paralysis of ocular muscles, the affection of the pupils, the presence of symptoms pointing to syphilitic affections of the cerebral nervous system (viz., hemiplegia, apoplexy, epileptiform attacks, and frequent headache); the presence of syphilitic affections of the skin, the mucous membranes, and the bones; the fact that in cases of tabes occurring late in life the patients have usually acquired syphilis late in life (in one case the patient acquired syphilis at the age of forty-eight, and became tabetic at the unusually late age of fifty-eight; in another case the patient, who had acquired syphilis at the age of thirty-eight, became tabetic at fifty); the relative frequency of syphilis and tabes in men and women (being in each disease as ten to one), the relative frequency of tabes and syphilis in women of the lower classes, the relative rarity of both in women of the higher classes, these facts Erb considers of great importance in assigning syphilis as the most important factor in the etiology of tabes. The occurrence of previous syphilis in tabetic women he considers not at all infrequent, for of 13 cases of tabes in women, 6 had a clear history of syphilis, 4 had no history, and in 3 cases the history was doubtful. From these statistics Professor Erb holds that syphilis is one of the most important, if not the most important, cause of the occurrence of tabes. That tabes is a specific disease, a late manifestation of syphilis, he does not consider to be proved, though he thinks it extremely probable.—*Medical Times and Gazette.*

RECENT INVESTIGATION ON THE BLOOD.—The Royal Academy of Medicine of Turin has unanimously awarded the Riberi prize of twenty thousand francs (four thousand dollars) to Professor Bizzozero for his researches on the "Physiopathology of Blood," the subject proposed by the Academy. The commissioners of award received several essays; those of Wharton Jones, Norris, Hayem, and Bizzozero were considered to deserve special consideration. The last two were assigned the first rank. The most important matter in both of these is the investigation of the third morphological element of the blood (Hayem's hæmatoblasts). The commissioners, all well-known *savants*, judged that Hayem did not completely demonstrate that the red globules are derived from the hæmatoblasts. Bizzozero solves the important problem of the origin of the red globules, determines the relation of the hæmatoblasts to coagulation, and throws new light on the formation of thrombi. His memoir was therefore deemed the more important, and to Bizzozero, accordingly, the very valuable award has been made.—*Science.*

BORACIC ACID.—Dr. Squibb writes of boracic—or more properly, according to the nomenclature of the late Pharmacopœia, *boric*—acid, as follows: If the powder be needed, as is generally the case, it should be specified

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in the prescription. The powder should be very fine, and should be white and light, and entirely free from particles when rubbed between the finger and thumb, feeling very like powdered soap. It is only such powder that answers well in eye-surgery or general surgery for dressings, and solutions are also best made from it. A saturated solution contains about nineteen grains to the ounce, and from ten grains in the ounce to saturation it is used as an eye-wash or to granulating and suppurating surfaces. It is a very bland and soothing application, both in powder and solution, relieving irritation and arresting suppuration. It is a potent antiseptic, much less expensive than salicylic acid, and it is odorless and more easily managed than carbolic acid. It is probably better than either to preserve hypodermic solutions. In surgical dressings it has the great advantage over carbolic acid of not being irritant or poisonous. But, not being volatile, it does not deodorize the air.—*Ephemeris.*

SUBSOIL WATER AND TYPHOID FEVER.—Some researches have lately been made by M. Tessier, of Lyons, with a view to test the strength of Pettenkofer's position. As our readers know, Pettenkofer believes that there is a close relationship between the fall in the level of the subsoil water and the rise in the curve indicating the rate of mortality from enteric fever and cholera. M. Tessier does not confirm the hypothesis of Pettenkofer. It was shown that the level of the ground water fell and rose with the waters of the Rhone. The other factor was obtained from the statistics of the hospital at Lyons. From a comparison of the curves indicating the amount of ground water and the death-rate from enteric fever it came out that the latter was directly proportional to the former. On the other hand, the investigation of three hundred to four hundred cases of typhoid fever has allowed Tessier to establish the fact that the sufferers had drunk of the water of the (surface) wells, and that those inhabitants who used water directly from the Rhone had been spared the disease.—*Lancet.*

SUBCUTANEOUS LIGATURE OF ULCERATING EPITHELIOMA.—In a case of repeated and exhausting hemorrhages from an ulcerating cancer of the mammary gland, Prof. Nussbaum applied a subcutaneous ligature, drawn so tightly as to strangulate the growth. The bleeding was at once arrested, but the effects upon the malignant growth were remarkable: it shrunk to one-fourth of its former size and began to cicatrize. The same principle, by another method, was subsequently carried into operation. The base of an ulcerating epithelioma was girdled by an incision through the skin, made with the thermo-caustic knife. The object attained in each case was a partial interruption of the arterial and nervous supply to the affected area, and the progress of the patients was so satisfactory as to call forth Prof. Nussbaum's approval and endorsement. He recommends a more extended trial of this method, especially where there is bleeding.

EASY METHOD OF POSTERIOR RHINOSCOPY.—The difficulty of posterior rhinoscopy in some cases, owing to unusual length and breadth of the uvula, or narrowness of the space between the anterior pillars of the fauces and the posterior wall of the pharynx, may be overcome by passing a piece of rubber cord or tape along the floor of the nostril on each side, over the uvula, and bringing it out through the mouth, tying the ends together in front, making some traction upon the soft palate so as to draw it forward. Mr. Walsham, in a communication to the *Lancet* (July 28), acknowledges the above expedient as being of American origin, but recommends red rubber tubing as possessing special advantages for the purpose, being non-irritating and requiring no instrument in its introduction.

BENZOIC SULPHINIDE.—In connection with an investigation upon the hydro-carbons of the coal-tar group, it was discovered by C. Fahlberg that a certain compound obtained by the oxidation of toluene-sulphamide with potassium permanganate tasted sweet. It was found that this is not poisonous in doses of two or three grammes, and is excreted by the urine. As it is intensely sweet, it has been recommended to sweeten glucose. It forms salts with any carbonate of the alkalies, alkaline earths, or metals, all its compounds having a sweet taste. It is, however, not an acid, properly speaking, but belongs to the class of sulphinides; it dissolves readily in alcohol and in hot water, less so in cold water.—*Proceedings of the Franklin Institute, Philadelphia; Scientific American.*

THE DANGER OF OPERATING FOR HYDROPNEUMOTHORAX IN PHTHISICAL PATIENTS.—At the meeting of the Hamburg Medical Society in October, 1882 (*Deutsche Med. Woch.*), Herr Bülau represented the danger of operating in cases of hydropneumothorax in phthisical patients. He considers that the pressure of the fluid in the pleural cavity prevents the advance of tuberculous processes in the lungs, and that they go on increasing rapidly when the pressure is suddenly removed.

In the discussion which followed at the next meeting, in November, Herr Curschmann recommended operative interference when the presence of air or fluid in the pleura became too great, especially in cases where a valvular opening had existed into a bronchus. —*London Medical Record.*

ADONIDIN.—Adonis vernalis contains a glucoside which has been employed as a substitute for digitalin, which it resembles in its physiological and therapeutical effects.

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Adonidin is furnished in the form of an amorphous powder, of a bitter taste, soluble in alcohol, much less so in ether or water. It is claimed to be free from a cumulative action, but more experiments are needed to establish its real value in medicine.

THE NERVE-CENTRES FOR UTERINE CONTRACTIONS.—Dr. Dembo claims to have discovered the ganglia concerned in the production of contractions of the uterus. He says they are situated in the anterior wall of the vagina, and are independent of the spinal cord.—*Centralbl. f. Gynäkol.*, August 11, 1883.

MISCELLANY.

THE COUVREUSE, OR MECHANICAL NURSE.—After two years' trial, says the *Lancet*, the *couvreuse* has proved so decided a success that a brief description of this ingenious contrivance may be desirable. It was in 1878 that Dr. Tarnier, when visiting the apparatus devised by M. Odile Martin for artificially hatching and rearing chickens, at the Jardin d'Acclimatation, suggested that a similar method might be applied with advantage to infants, especially in cases of premature birth. Two years elapsed, however, before any attempt was made to carry out this proposal; but in the course of the year 1880 a *couvreuse* was made and brought to the hospital of the Maternité. This is a plain wooden case or box measuring about two feet eight inches by two feet four inches, and two feet four inches in height. The box has a double covering, the space between being filled with sawdust to retain the heat, and is divided into two parts. The lower half contains a reservoir which holds about sixty litres of water, and is fed by a patent boiler that stands outside the box and is warmed by an oil lamp; or hot water may be used without recourse to the lamp. The upper portion of the box forms a warm chamber, where a little basket or cradle is placed large enough to hold two infants. From an opening at the side, this cradle may be withdrawn, while the top of the box has a double glass covering, so that the children and the thermometer lying by their side can be constantly watched. If the water used in the first instance is cold, it takes a long time to attain the required temperature; but once this is done, the lamp need only be relit three or four times during the course of the day. It is best to warm the apparatus while the infants are being fed or washed. The temperature within the *couvreuse* is generally maintained at 86° F., and, though the contrast on withdrawing the child to be fed or washed is very great, amounting often to 30° F., colds are not so frequent as among the infants nursed in the ordinary manner. Altogether, the experiment is considered so successful that it is proposed to supply all the hospitals of France with a *couvreuse*, and there is every reason to anticipate good results from this measure. Nor is this all. A small portable *couvreuse* is now about to be tried which could be carried by hand from house to house. After this we shall probably have perambulators constructed on the same model. In conclusion, we should remark that though no very careful experiments have been made with respect to the ventilation within the *couvreuse*, yet this is evidently sufficient. Apertures are made in the lower portion of the box, the fresh air travels over the hot-water reservoir, and is thus warmed before it reaches the child. The very great difference of temperature within the *couvreuse* insures a constant current of air, though the child is protected by its cradle and clothes from any draught.—*New York Medical Journal.*

AMERICAN PUBLIC HEALTH ASSOCIATION.—The American Public Health Association will hold its eleventh annual session at Detroit, Michigan, commencing Tuesday, November 13, 1883, and ending Friday, November 16.

The subjects which have been chosen for special consideration at that time are:

1. Malaria.—Its etiology and the methods for its prevention in localities or in persons; its American history; its specific particles; its origin; the conditions of its pervasion; its laws of extension, etc.

2. Foods.—Their adulterations; healthy or deleterious modes of preservation, and the function of legislation in regard to them. Ascertained facts as to adulterations in this country. Facts as to canned goods, condensed milk, artificial butter and cheese, prepared meats, etc.

3. Vital Statistics.—Methods and results; defects apparent. How far foreign modes of tabulation are to be followed. Systems of collection and classification. Race vitality and the care of population as indicated by statistics.

4. The Control and Removal of all Decomposable Material from Households.—The mechanical laws, constructions, and appliances relative thereto. The construction of all inside pipes and their connections, their traps, and siphonage, flushing, ventilation. How they shall be connected with out-door receptacles, and yet be free from ill effect.

Methods and systems of physical education, drill, etc., feasible in the school-room, will be discussed. While papers of merit on other topics are by no means excluded, it is believed wise to concentrate the preparation of papers and discussion upon these topics.

The Executive Committee insists that a synopsis of the papers to be offered, and statement of the time required for reading, be sent to the Secretary by October 15, and that the paper complete be in the hands of

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the Secretary at least three days before the meeting, having been sent by mail or express either to his office at Boston, or cafe of Dr. William Brodie, Detroit, Michigan, after November 9.

The Executive Committee feels warranted in saying that the meeting promises to be one eminently inviting and profitable, and urges the attendance and co-operation of physicians, engineers, architects, teachers, and all those interested in the advancement of public health and physical well-being.

Inquiries of a local character may be addressed to William Brodie, M.D., Chairman Local Committee, Detroit, Michigan.—*The Medical Age.*

AMERICAN GYNÆCOLOGICAL SOCIETY.—The eighth annual meeting of the American Gynæcological Society was held in Philadelphia, at the hall of the College of Physicians, on Tuesday, Wednesday, and Thursday, September 18, 19, and 20. Papers were read on "Superinvolution of the Uterus," by Dr. Joseph Taber Johnson, of Washington; "The Importance of Cleanliness in Surgical Operations," by Dr. R. Stansbury Sutton, of Pittsburg, Pa.; "Hot Water in Secondary Hemorrhage after Pelvic Operations," by Dr. Albert H. Smith, of Philadelphia; "Some Points connected with the Subject of Dysmenorrhœa," by Dr. C. D. Palmer, of Cincinnati; "An Unusual Form of Abdominal Tumor—Three Cases," by Dr. Thaddeus A. Reamy, of Cincinnati; "Is Extirpation of the Cancerous Uterus a Justifiable Operation?" by Dr. A. Reeves Jackson, of Chicago; "A Biographical Sketch of Dr. Nathan Smith, Founder of the Dartmouth Medical College" (being the President's Address), by Dr. Gilman Kimball, of Lowell, Mass.; "A Study of the Etiology of Perineal Laceration, with a New Method for its Proper Repair," by Dr. Thomas A. Emmet, of New York; "The Management of Accidental Puncture and Other Injuries of the Gravid Uterus as a Complication of Laparotomy," by Dr. Charles Carroll Lee, of New York; "Congenital Fissure of the Female Urethra with Exstrophy of the Bladder," and "Menstruation after Extirpation of the Ovaries," by Dr. Henry F. Campbell, of Augusta, Ga.; "Remarks on Chronic Abscess of the Pelvis," by Dr. William H. Byford, of Chicago, and others. A full report of the sessions will appear in our next issue.

BUTTERINE.—Messrs. Tidy and Wigner have recently reported to the Society of Public Analysts the results of some experiments on the action of the mammary tissue of the cow on mutton fat, which tend to show that some ferment therein contained possesses the power of assimilating these fats more or less to those of butter, by converting the insoluble into soluble fatty acids, and doubtless milk itself, containing, as it does, epithelium and other derivatives from the mammary ducts, contains also some of the ferment in question. Oleomargarine contains more olein and less stearin than the fat from which it is made, the higher melting-point of the stearin permitting of its separation under moderate pressure and heat; but it would seem that whether the inventor of butterine (M. Mège) was quite conscious of what he was doing, or not, the incorporation of a certain quantity of milk with the oleomargarine brings about those changes in the fatty acids which Tidy and Wigner obtained by means of mammary tissue or its alcoholic extract, and which very probably take place in the gland as a physiological process in the natural secretion of milk, analogous to the conversion in the stomach of albumen into peptones.—*Medical Times and Gazette.*

DANGER LURKING IN SODA-WATER.—The public analysts of Montreal and Toronto, Drs. Edwards and Ellis, have been examining samples of soda-water, and report that in a majority of cases lead and sometimes copper is present. Dr. Edwards examined twelve samples purchased in Montreal and found lead or copper in ten of them. Five contained both lead and copper, and five contained lead only. In some samples only "traces" of the metals were found, while in others the water was "largely impregnated" with one or both of the metals. Dr. Ellis in twelve samples of Toronto soda-water found only three which were free from lead. No mention is made of the presence of copper. The quantity of lead varied from .07 of a grain to .5 of a grain to the gallon, the average of nine samples being .32 of a grain. All of the above samples were taken from fountain cisterns, bottled soda-water being invariably found free from metallic impurities.—*Sanitary Engineer.*

[This is in confirmation of an article recently published in these columns by Dr. Hays, of Pittsburg, and justifies his remarks.]

ORIGIN OF THE CHOLERA EPIDEMIC.—A very interesting report has been published by Chaffey Bey as to the origin of the outbreak at Damietta. After a careful analysis of all the circumstances of the case, he arrives at the conclusion that the cholera was not imported, but broke out spontaneously on account of the condition of the river and city, which this year presented conditions similar to those to be found on the banks of the Ganges when the epidemic made its appearance. The great fair at Damietta attracted a crowd of fifteen thousand people, who for eight days lived on foul water and decayed fish.—*British Medical Journal.*

THE POLYCLINIC:—not the first time, by twenty centuries!—The following is in the *Medical Times and Gazette* of April 7, 1883, taken from the *Lyon Médical*: "The little son of my porter having fallen ill, I inquired about him, and learned that he was being attended by a doctor who lived a long way off,

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although one resides on the premises. Expressing my surprise, the father said, 'Well, what is to be done? M——is, perhaps, a good doctor, but I have no confidence in him.' How so? 'Why, you see,' replied the porter, lowering his voice, 'he gives advice gratis.'"

The following, from the Talmud, is more terse: "Asya dim'gan bim'gan shaveh," which is Arabic, and, being interpreted, meaneth, "The physician who cures for nothing is worth nothing." Similarly in "King Lear" we have,—

"*Kent.* This is nothing, fool."

"*Fool.* Then 'tis like the voice of an unfee'd lawyer."—*Medical Age.*

In the Berlin Sanitary Exhibition there is exhibited a "people's kitchen." A wholesome meal is furnished at noon for six cents. In Berlin there are fourteen such kitchens, which are operated by an association patronized by the Imperial government. At these kitchens a meal consists of blood- and muscle-foods, and of alkaline salts and alcoholic stimulants. The meal at noonday, compounded on a scientific basis, must contain fifty-nine grammes of albumen, thirty-four grammes of fatty matter, and one hundred and sixty grammes of hydro-carbonaceous matter. The dinner, as served in a tin basin, consists of one litre of cooked vegetables, and a piece of meat which weighs seventy-five grammes. These kitchens are abundantly patronized, and the income is plentiful. —*Sanitary News.*

A Nail embedded in the Brain.—In an autopsy on a patient dying in one of the Vienna hospitals there was found in his brain an iron nail covered with rust, which to all appearances must have been there since early childhood. The man was about forty-five years of age, a bookbinder, and always passed for intelligent. Negative popular evidence, however, is of but little value. The man, at regular intervals, had epileptic attacks, and post-epileptic mental phenomena while in the hospital.—*Medical Press and Circular.* [*Credat Judæus Apella!*]

Silk Ligatures.—Prof. William Pancoast claims that a pure iron-dyed silk affords, after all, the best ligature, being thoroughly flexible, very strong, antiseptic, and as truly animal in its origin as catgut. He believes that white and colored silks are often irritant from drugs used in their preparation. Natural silk is yellow, not white. He claims that it is especially valuable in minute, delicate operations about the eyes, etc. It is furnished by Mr. Wm. Snowden, of this city.

Chloral Hydrate as a Purgative.—B. Bonatti recommends chloral hydrate in combination with senna as a rapid and safe drastic cathartic. He prescribes,—℞ Infus. sennæ, f℥x; chloral hydratis, gr. xxiv to 1; syrupi, f℥j. M. With this he obtained an action where cotoin and jalap had failed.—*Deutsche Med. Zeitung; Pharmaceutical Gazette*, July, 1883.

Association for Diseases of the Respiratory Organs and Climatology.—A meeting for the purpose of organizing a national "Association for Diseases of the Respiratory Organs and Climatology" will be held in the parlors of the Academy of Medicine in New York City (12 West Thirty-first Street), on Tuesday, September 25, at 10 A.M.

Harvard Medical School.—The Medical Faculty of Harvard University will celebrate the centennial anniversary of the establishment of the school on October 17. Dr. Oliver Wendell Holmes will deliver an oration, after which the new building recently erected for the college on Boylston Street will be dedicated.

The cholera epidemic in Egypt seems to be at an end. During its whole course—that is, in about three months—it has destroyed nearly thirty thousand lives.

The well-known anatomist, Pacini, recently died at Padua.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY FROM SEPTEMBER 1 TO SEPTEMBER 15, 1883.

Bartholf, John H., Captain and Assistant-Surgeon.—Station changed from Fort Lapwai, I. T., to Vancouver Barracks, W. T. Paragraph 2, S. O. 123, Department of the Columbia. September 6, 1883.

Shufeldt, Robert W., Captain and Assistant-Surgeon.—Granted leave of absence for three months on surgeon's certificate of disability, with permission to leave the Department of the South. Paragraph 3, S. O. 204, A. G. O., September 5, 1883.

Banister, J. M., First-Lieutenant and Assistant-Surgeon.—Assigned to duty at Fort Adams, Rhode Island. Paragraph 3, S. O. 170, Department of the East, September 10, 1883.

Wakeman, W. J., First-Lieutenant and Assistant-Surgeon.—Assigned to temporary duty at Fort Sidney, Nebraska. Paragraph 2, S. O. 92, Department of the Platte, August 28, 1883.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY FROM SEPTEMBER 1 TO SEPTEMBER 15, 1883.

P. A. Surgeon Oliver Diehl detached from the Naval Academy and ordered to the U.S. steam-ship "Quinnebaug," European Station, per steamer of the 15th inst.

P. A. Surgeon Frank Anderson detached from the U.S. steam-ship "Quinnebaug," on reporting of relief, and granted leave of absence for three months.

Surgeon G. S. Beardsley and P. A. Surgeon George C. Lippincott detached from the "Galena," and placed on waiting-orders.

P. A. Surgeon H. T. Percy detached from the Naval Hospital, Norfolk, and ordered to the U.S. steam-ship "Galena."

Surgeon George A. Bright detached from the Naval Rendezvous, Philadelphia, on September 30, and ordered to the "Galena," October 1.

P. A. Surgeon R. A. Urquhart ordered to the "Alert" on October 6, and on the arrival of that vessel at Yokohama, Japan, to be detached and to report for duty at the Naval Hospital at that place.

P. A. Surgeon M. H. Simons to be detached from the Naval Hospital, Yokohama, Japan, on the reporting of his relief, and ordered to the U.S. steam-ship "Alert."

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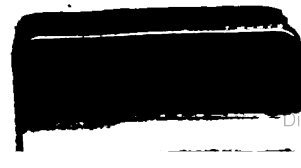

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